DOCUMENT RESUME

ED 242 232 HE 017 038

AUTHOR	Anderson, Richard E.
TITLE	Finance and Effectiveness: A Study of College Environments.
INSTITUTION	Educational Testing Service, Princeton, N.J.
SPONS AGENCY	Lilly Endowment, Inc., Indianapolis, Ind.
PUB DATE	Sep 83
NOTE	193p.
AVAILABLE FROM	Educational Testing Service, College and University Programs, Princeton, NJ 08541 ($8.00).
PUB TYPE	Reports - Research/Technical (143) -- Tests/Evaluation Instruments (160)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Check Lists; *College Environment; *Economic Factors; *Educational Finance; Enrollment Trends; Expenditures; *Financial Problems; Higher Education; Income; *Institutional Evaluation; Longitudinal Studies; School Surveys; *Teacher Attitudes; Trend Analysis
IDENTIFIERS	*Institutional Vitality

ABSTRACT

Results of a study of financial conditions and the functioning of 93 U.S. colleges and universities are presented. Institutional data were collected every third year between 1967-1968 and 1979-1980. Samples of faculty at each institution were surveyed in the late 1960s or early 1970s and again in 1980-1981. The Educational Testing Service's Institutional Functioning Inventory (IFI) was administered to the schools, and 13 colleges were visited. Results include the following: the average college had considerably more purchasing power at the close of the decade, but most of these resources had been used up by enrollment increases; the increase of federal funds was matched by declines in state support at public institutions and by declines in tuition and private gifts and grants at private colleges; and the decline in faculty pay in the 1970s matches almost exactly the increases in pay of the 1960s. Findings regarding changes in the higher education environment, indications of institutional effectiveness, and faculty perceptions are discussed, and recommendations for administrators and public officials are offered. An analysis of trends in educational demand and college income and expenditures is included as background information. Participating institutions are listed by Carnegie classification and IFI scale items are listed. (SW)

****
*   Reproductions supplied by EDRS are the best that can be made   *
*   from the original document.   *
****

ED242232

Finance and Effectiveness:
A Study of College Environments

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY
Richard E. Anderson
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
● Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

by Richard E. Anderson

HE 017 838

Research for this report was carried out under a grant from the Lilly Endowment.

Copies of this study may be ordered from College and University Programs at Educational Testing Service, Princeton, New Jersey 08541. The price is $8 plus postage. Editorial inquiries concerning this study should be directed to Richard Anderson, Teachers College, Columbia University, New York, New York 10027.

Copyright © 1983 by Educational Testing Service. All rights reserved.
Printed in the United States of America.

FINANCE AND EFFECTIVENESS:
A STUDY OF COLLEGE ENVIRONMENTS

Richard E. Anderson
September, 1983

Research supported by the Lilly Endowment.

Acknowledgements

Many people have contributed to this study and the preparation of the report. Mike Suzor organized much of the data collection. Mike Cavanaugh assisted in the financial analyses. Rod Hartnett provided guidance on the use of the IFI. Bob Birnbaum and Wagner Thielens were good colleagues; they were appropriately supportive and critical as the occasion required. Debbie Inman began as administrative assistant to the project, but soon became a partner in the research effort. Her dedication and concern made the research more effective and pleasant. Stu Varden, Howie Spivak, and Janet Asteroff, as computer consultants, were effective liasons between us and the room full of chips and wires. Nora Eisenberg provided essential editorial guidance. Nancy Beck was our friend at ETS, assisting us from conception of the project right through to publication. Of course, the project could not have been undertaken without support from the Lilly Endowment. Ralph Lundgren and Laura Bornholdt at the Lilly Endowment provided thoughtful comments and encouragement. Finally, we gratefully acknowledge the officers at the ninety-three colleges and universities who provided us with information and constructive criticism. All of the above people made the report possible. I trust that I have not let them down. All errors, both of ommission and commission, are mine alone.

TABLE OF CONTENTS

EXECUTIVE SUMMARY AND RECOMMENDATIONS 1
1. THE STUDY 11
  THE REPORT 13
  THE COLLEGES AND THE INFORMATION THEY SUPPLIED 13
    The Sample 13
    Financial Data and Analyses 15
    IFI Data 17
    Summary 21
2. FINANCIAL TRENDS 23
  DEMAND 24
    Enrollment 24
    Percent of Freshman Applications Accepted 24
    Yield 26
    SAT Scores 26
  INCOME AND EXPENDITURES 33
    Trends for the Full Sample 34
    Public and Private Institutions 36
    Public Institutions by Carnegie Classification 39
    Private Institutions by Carnegie Classification 43
    Salary Analysis 49
    Maintenance and Operations 52
  BALANCE SHEET ANALYSIS 56
  WHAT HAPPENED IN THE SEVENTIES 60
3. CHANGES IN CAMPUS FUNCTIONING 63
  SCALE SCORE CHANGES FOR ALL INSTITUTIONS 64
    Measured Changes as Evidence of Validity 64
    Responses to the Items 66
    Intellectual-Aesthetic Extracurriculum 66
    Freedom 67
    Human Diversity 68
    Concern for Improving Society 69
    Concern for Undergraduate Learning 71
    Democratic Governance 71
    Meeting Local Needs 74
    Self Study and Planning 74
    Concern for Advancing Knowledge 74
    Concern for Innovation 77
    Institutional Esprit 78
  PUBLIC AND PRIVATE INSTITUTIONS 79
    Public Institutions by Carnegie Classification 82
    Private Institutions by Carnegie Classification 87

Table of Contents

SUMMARY 94

4. OTHER FACULTY OPINIONS 97

RESULTS 97

- Can Faculty Get $500? 102
- Support Services 103
- Non-Financial Rewards of Faculty Membership 103
- Outside Income 103
- Are Faculty Leaving Academe? 104
- Perceptions of College Financial Conditions 105

SUMMARY 105

5. RELATING CHANGING FINANCES TO FACULTY PERCEPTIONS 107

IFI RESULTS BY FINANCIAL GROUPINGS 109

- Private Colleges 109
- Public Colleges 110

MULTIVARIATE ANALYSES 116

- The NCHEMS Model 116
- Testing Other Models 117

SUMMARY 119

6. THE CAMPUS VISITS 121

SIX INSTITUTIONS 121

- Muni Two-Year 122
- Suburban Two-Year 126
- City Two-Year 129
- Mountain College 132
- Plain College 135
- Special University 138

SUMMARY 141

7. SUMMARY RESULTS 143

FINANCIAL RESULTS 143

- Financial Operation 144
- Capital Structure of Private Institutions 147
- The Scramble for Students 148

THE CHANGES IN CAMPUS ENVIRONMENT 148

RESOURCES AND FACULTY PERCEPTIONS 150

SUCCESSFUL AND UNSUCCESSFUL COLLEGES 151

A. INSTITUTIONS BY CARNEGIE CLASSIFICATION 157

B. LISTING OF ITEMS BY SCALE 161

LIST OF CHARTS

Chart 2-1: Average FTE Enrollment 25
Chart 2-2: Average Percent Accepted: Public Institutions 27
Chart 2-3: Average Percent Accepted: Private Institutions 28
Chart 2-4: Average "Yield": Public Institutions 29
Chart 2-5: Average "Yield": Private Institutions 30
Chart 2-6: Average Entering SAT Scores: Public Institutions 31
Chart 2-7: Average Entering SAT Scores: Private Institutions 32
Chart 2-8: Income and Expenditures: All Colleges and Universities 35
Chart 2-9: Income and Expenditures: Public Colleges and Universities 37
Chart 2-10: Income and Expenditures: Private Colleges and Universities 38
Chart 2-11: Income and Expenditures: Public Research and Doctoral Universities 40
Chart 2-12: Income and Expenditures: Public Comprehensive Universities 41
Chart 2-13: Income and Expenditures: Public Two-Year Colleges 42
Chart 2-14: Income and Expenditures: Private Research and Doctoral Universities 44
Chart 2-15: Income and Expenditures: Private Comprehensive Universities 45
Chart 2-16: Income and Expenditures: Private Liberal Arts Colleges I 46
Chart 2-17: Income and Expenditures: Private Liberal Arts Colleges II 47
Chart 2-18: Income and Expenditures: Private Two-Year Colleges 48
Chart 2-19: Average Faculty Salaries and Non-Farm Wages (In 1980 Dollars) 51
Chart 2-20: Average and Median Salaries of Selected Professional Groups (In 1980 Dollars) 53
Chart 2-21: Maintenance and Operating Expenditures Per $1000 of Plant 55
Chart 2-22: Median Balance Sheet Ratios for Private Colleges 59
Chart 3-1: Changes on the Institutional Functioning Inventory: All Colleges and Universities 65
Chart 3-2: Changes on the Institutional Functioning Inventory: Public Colleges and Universities 80
Chart 3-3: Changes on the Institutional Functioning Inventory: Private Colleges and Universities 81
Chart 3-4: Changes on the Institutional Functioning Inventory: Public Research and Doctoral Universities 83
Chart 3-5: Changes on the Institutional Functioning Inventory: Public Comprehensive Universities 84
Chart 3-6: Changes on the Institutional Functioning Inventory: Public Two-Year Colleges 85
Chart 3-7: Changes on the Institutional Functioning Inventory: Private Research and Doctoral Universities 88
Chart 3-8: Changes on the Institutional Functioning Inventory: Private Comprehensive Universities 89

List of Charts

Chart 3-9: Changes on the Institutional Functioning Inventory: Private Liberal Arts Colleges I 90

Chart 3-10: Changes on the Institutional Functioning Inventory: Private Liberal Arts Colleges II 91

Chart 3-11: Changes on the Institutional Functioning Inventory: Private Two-Year Colleges 92

Chart 5-1: Revenues Per Student at Hypothetical College 108

Chart 5-2: Changes on the Institutional Functioning Inventory: Private Institutions with the Best Financial Trend 111

Chart 5-3: Changes on the Institutional Functioning Inventory: Private Institutions with the Worst Financial Trend 112

Chart 5-4: Changes on the Institutional Functioning Inventory: Public Institutions with the Best Financial Trends 114

Chart 5-5: Changes on the Institutional Functioning Inventory: Public Institutions with the Worst Financial Trend 115

Chart 6-1: Changes on the Institutional Functioning Inventory: Muni Two-Year College 123

Chart 6-2: Changes on the Institutional Functioning Inventory: Suburban Two-Year College 128

Chart 6-3: Changes on the Institutional Functioning Inventory: City Two-Year College 131

Chart 6-4: Changes on the Institutional Functioning Inventory: Mountain College 134

Chart 6-5: Changes on the Institutional Functioning Inventory: Plain College 137

Chart 6-6: Changes on the Institutional Functioning Inventory: Special University 140

LIST OF TABLES

Table 1-1: Geographic Distribution of the Sample 15
Table 1-2: IFI Scale Definitions 17
Table 2-1: Peat, Marwick, Mitchell & Co. Balance Sheet Ratios 57
Table 3-1: Items on the Intellectual-Aesthetic Extracurriculum Scale for which Responses Changed at least 5 Percentiles 67
Table 3-2: Items on the Freedom Scale for which Responses Changed at least 5 Percentiles 68
Table 3-3: Items on the Human Diversity Scale for which Responses Changed at least 5 Percentiles 69
Table 3-4: Items on the Concern for Improvement of Society Scale for Which Responses Changed at least 5 Percentiles 70
Table 3-5: Items on the Concern for Undergraduate Learning Scale for Which Responses Changed at least 5 Percentiles 72
Table 3-6: Items on the Democratric Governance Scale for Which Responses Changed at least 5 Percentiles 73
Table 3-7: Items on the Meeting Local Needs Scale for Which Responses Changed at least 5 Percentiles 75
Table 3-8: Items on the Self-Study and Planning Scale for Which Responses Changed at least 5 Percentiles 76
Table 3-9: Items on the Concern for Advancing Knowledge Scale for Which Responses Changed at least 5 Percentiles 76
Table 3-10: Items on the Concern for Innovation Scale for Which Responses Changed at least 5 Percentiles 77
Table 3-11: Items on the Institutional Esprit Scale for Which Responses Changed at least 5 Percentiles 78
Table 3-12: Items Related to Disadvantaged Students at Private Liberal Art I Colleges 93
Table 4-1: Local Option Questions 98
Table 5-1: Example of Financial Change Index 110
Table 5-2: Regression of the Weighted IFI Change Score Against Financial and Other Variables 118

EXECUTIVE SUMMARY AND RECOMMENDATIONS

In 1971, *The New Depression in Higher Education* was one of the first shots in what was to become a barrage of studies on college and university financial well-being. Later studies used larger samples; fund balance information supplemented current fund data as strategists borrowed methods from Wall Street; and multivariate statistics were added to the analytic artillary. In spite of these improvements, a fundamental problem remained -- the lack of satisfactory measures for evaluating institutional effectiveness. Unlike their Wall Street counterparts who count both investment and earnings in dollars, analysts of higher education must deal with such ambiguous and diverse output measures as student learning, the production of scholarship, and community service. Therefore these studies tend to focus simply on finances or use crude proxies for effectiveness like the number of degrees granted, counts of students attending, or the variety of programs offered.

In an attempt to expand the analysis of institutional financial health, we assembled a unique data base. A sample of ninety-three colleges and universities that had administered the Institutional Functioning Inventory to their faculty in the late 1960's or early 1970's re-administered the Inventory in 1980-81. The Institutional Functioning Inventory, with 132 items, measures campus climate on eleven scales including Concern for Improving Society, Concern for Undergraduate Instruction, Meeting Local Needs, Concern for Innovation, and Institutional Esprit. At the same time we collected financial, enrollment and personnel data for every third year between 1967-68 and 1979-80. After analyzing these data, we visited thirteen colleges, selecting most of the campuses because of results that were contrary to our expectations. For example, the IFI may have measured positive institutional development while financing or enrollments weakened. We visited other colleges because the opposite occurred -- faculty were increasingly dissatisfied, yet enrollments and income were growing.

FINANCIAL RESULTS

The financial analyses indicate that higher education fared reasonably well during the 1970's. Average educational and general income rose 44 percent beyond inflation between 1968 and 1980. On a per student basis, however, the total increase was only 10 percent--all of the growth occurring between 1968 and 1974. There were some modest variations by sector and Carnegie Classification but generally that pattern held. In sum, *the average college had considerably more purchasing power at the close of the decade but most of these resources had been used up by enrollment increases.* Over the period, Washington became a more important source of funds, its share of educational and general income rising from six to nine percent. *The increase of federal funds was matched by declines in state support at public institutions and by declines in tuition and private gifts and grants at independent colleges and universities.* Local support for public community colleges fell sharply but was replaced by state funding.

Funding, then, has been moving away from the campus, and there is now the worrisome possibility that more decisions will be made by officials who are both geographically and educationally "out-of-touch." Moreover, federal, state, and local governments are increasingly facing resistance from taxpayers over the scope and tax burden of the various public enterprises. A challenge facing policy makers will be to replace the recently faltering public support with private funds. Individual and corporate gifts are potential sources of revenue, but they are unlikely to be of significant magnitude. Tuition paid by students and their families has not increased as rapidly as consumer prices nor as rapidly as family disposable income. The financial resources of students and their families are a large potential source of funds for colleges and universities. Creative ways can be found to tap these resources. Tax incentives for families to save for education offer one approach. The popular Individual Retirement Account (IRA) should be explored as a possible mechanism for such incentives. In its present form, the IRA actually threatens college funding. Savers who currently use IRA's are likely to find when their children reach college age, the bulk of family savings locked into these accounts and the use of these funds for college expenses creating a tax liability. *But if higher education leaders and interested congressmen pursue the possibility of allowing parents to borrow from IRA's without tax penalties, the IRA could become a rich resource for higher education.*

Administration and general institutional expenditures received a larger share of the budget in 1980 than in 1968. Public institutions these days are spending slightly more on research and public service, particularly the latter. Private institutions devote more of their funds to student aid. In this analysis of budget percentages, the category of "instruction and departmental research" is on the losing end in both sectors. The cause is no secret. Faculty salaries have not risen as rapidly as prices during the 1970's. *The decline in faculty pay in the 1970's matches almost exactly the increases in pay of the 1960's. When faculty salaries are compared with other professionals, however, the decline in relative pay is severe.* Dentists, for example, earned about as much as faculty in 1940. By 1980 the average earnings by dentists was almost 175 percent higher than those of professors. One costless way in which college administrators can increase the income of faculty is to allow grants and contracts to pay "override" income to faculty. For example, a professor who receives a grant might write the budget to include a 15 or 20 percent salary supplement. At public institutions, such a change may require system or even legislative approval. An impediment to such a policy is that it may be viewed as a form of institutionalized "double dipping" and, therefore, politically awkward to initiate. However, public concern about the inadequacy of faculty salaries is rising, and now may be an appropriate time to institute incentives like this. A potential drawback of this policy is that it might tip the balance of faculty activities from teaching to research. Bonuses to particularly effective teachers may be a desirable counter-weight.

Analysts have also expressed concern about the rising incidence of deferred maintenance. Although the percent of educational and general expenditures devoted to plant operation and maintenance has not changed appreciably, this percentage statistic is an inadequate indicator. One reason is that it fails to consider the amount of construction that has occurred in recent decades. *"Maintenance and plant operation" expenditures per $1000's of plant declined 43 percent over the decade.* Even this statistic may understate the magnitude of the problem. A larger percentage of recent maintenance and plant operation expenditures is devoted to fuel costs. Colleges, like every other organization buying fuel, have been forced to pay much higher market prices. At some campuses, added expenditures for security have further diluted the "maintenance and operations" budget. Additionally, plant values have an historical basis. If plant replacement values were in the denominator, the ratio of expenditures to plant value would have shown an even greater decline. It is impossible to estimate how much of the drop in maintenance expenditures has been absorbed by improved efficiency or by reducing cosmetic activities -- cutting lawns less often, washing windows more infrequently, and similar savings. To the extent that the reduction in maintenance expenditures has created a backlog of necessary structural repairs, the physical plants of colleges and universities will deteriorate and major capital outlays will be necessary in the coming decades.

Conversations with campus officials as well as other data collected reveal that the *enrollments are being maintained by "scrambling."* The percent of applicants accepted, for example, has risen. The apparently liberalized admissions policies are especially noticeable at public and private Comprehensive Colleges and Universities and at Private Liberal Arts II colleges. In contrast to the percentage of students accepted, the matriculation "yields" from students offered admission are down, particularly at the public institutions. Average SAT scores for entering freshman are down for all categories of institutions, but the rate of change parallels the average score for all test takers. When campus officials discuss their concerns for their colleges, they typically mention enrollments and related issues first. These administrators are doing almost everything they can to make their institutions more attractive to students--to both traditional young adults as well as to area residents. *If academic accommodations are taken to extremes and sub-*

vert the curriculum, then there will be cause for alarm. The results of the IFI, while not specifically addressing academic abuses, provide evidence that this competition for students may be causing some positive influences on educational processes and procedures.

CHANGES IN CAMPUS ENVIRONMENT

Changing faculty responses to the Institutional Functioning Inventory reveal several clear (and statistically significant) trends occurring during the decade. Most of these changes support commonly held perceptions about the current higher education environment. *Particularly noticeable is the increase in the continuing education efforts of these institutions.* In the early seventies two-thirds of the faculty responded that their campus had an adult education program. By 1981, almost 80 percent reported the existence of these programs. *Campus diversity has increased socio-economically but not politically.* Many more students of varying backgrounds and abilities are attending in the 1980's. Consequently there has been a large increase in the visibility of programs for disadvantaged students. These programs are only a part of the structural changes that have occurred to meet the needs of undergraduate students. Faculty responses indicate that *tenure and promotion are more likely to be based on teaching effectiveness.* These faculty also report that their colleagues are more concerned with "the best method to communicate knowledge to undergraduates" and with getting to know their students better.

Faculty perceive their colleges to be less democratically governed. According to the respondents, *administrators are making more of the decisions and involving students and faculty less than they did in the early 1970's.* Professors also perceive considerably less academic innovation, and in the 1980's, the impetus behind new ideas is more likely to be financial. As college campuses have become more conservative the constituent groups also have exhibited less interest in improving society. Faculty note this reduced concern in themselves, in their students, and in the administrators and the trustees of the institutions.

The "scramble" for students has intruded upon the college environment. Colleges are not as free wheeling in the 1980's -- and probably not as much fun. In spite of the declines measured by the IFI, the colleges studied are functioning about as effectively as they did in the early seventies. The instruction of undergraduate students is receiving more attention. Disadvantaged students are more likely to get remedial work, and colleges are reaching out and offering their services more regularly to their neighbors.

The changes on the IFI scales were not uniform for all groups of institutions. This is particularly noticeable in the public sector. *State supported universities--both the comprehensive regional ones and those with a major commitment to research and doctoral programs -- exhibited increases in almost all areas except Concern for Innovation. In contrast, the community colleges declined on four scales with the rest of the IFI indices remaining essentially unchanged.* Most of the faculty at these two-year institutions perceive themselves to be largely excluded from government. Morale has declined precipitously. The innovative character and willingness to experiment also appear greatly diminished at community colleges.

A comparison of the two sets of faculty surveys confirmed anecdotal reports about changes in American higher education. There has been, for example, greater emphasis on continuing education but otherwise less innovation. There have been changes in groups and in single institutions that are unexpected and startling and in many cases undesirable. It is important that deterioration of campus climate and capacities not be allowed to go unattended. True, the problems of balancing budgets, negotiating contracts, and settling legal claims are real and immediate, demanding administrative attention. The more ambiguous problems concerning campus climate and effectiveness, however, should not be simply relegated to mention at a college's annual convocation and then be set aside while the more clamorous problems are attended to, as is current custom. For after a while, the educational and environmental erosions can become so great as to be virtually irreversible. Regular surveys of faculty, students, and staff are one way to gather objective data about these changes. These data, of course, are not an end in themselves. They will often require further investigation and clarification. However, such surveys bring a sense of objectivity and immediacy to the issues and increase the likelihood that the problems will receive timely attention. *Administrators are urged to use surveys on a regular basis to assess campus climate.* The results should be discussed in committees with administrators and other relevant constitutent groups with follow-up action as necessary.

The attempt to relate changes in the IFI with changes in institutional finance was almost totally unsuccessful. Several methods were tried and none showed any significant relationships. One reason for the absence of a correlation is that neither the financial nor the functioning measures are without problems. More important, however, is the fact that as financial problems develop, institutions and their faculties try harder. *This institutional mobilization acts as a buffer between finances and effectiveness. If enrollments begin to slip, for example, more attention is given to the instructional process and to continuing education programs. It would be foolish, of course, to assert that changes in available resources are not related to campus functioning and that extra effort can replace all lost funds. However, during the 1970's, it appears that other internal and ex-*

ternal forces were more significant factors than finance in determining the campus environment.

SUCCESSFUL AND UNSUCCESSFUL COLLEGES

The most important finding to come from the college visits is that administrative leadership generally, presidential leadership specifically, is still an important force on many campuses. The thirteen institutions visited were not among the largest nor most prestigious institutions in the country. At these more modest colleges and universities, presidents have enormous influence on the campus environment and on institutional effectiveness.

Direct intrusion by presidents and other senior administrators was, however, quite limited. *High levels of democratic governance were especially noticeable in the most effectively managed institutions and were generally absent in the least effective institutions.* The relationship between effectiveness and democratic governance is attributed to the difficulty of measuring and evaluating college outcomes. If one cannot gauge the outcomes with some precision, it follows that it will be difficult to evaluate and control faculty. This is particularly true if tenure and collective bargaining agreements intrude in personnel policies. For an institution to be successful the faculty must be creative, energetic, and dedicated to their institution. Sustaining these qualities for a prolonged period of time is a monumental task and probably cannot be achieved through bureaucratic management. *If you cannot measure with reasonable accuracy what someone is doing, you cannot evaluate and control that individual with ordinary management techniques. Professors must believe in their institutions; they must assume a sense of proprietorship for their campuses. Democratic governance may be the best means by which to cultivate this "ownership" attitude.* For if faculty feel that the institution is theirs to govern, their energies will more likely be given to its best interests. This seems to be as true at community colleges as it is at four-year institutions. *The level of institutional financial support and faculty salaries appear to have less effect on faculty morale than the meaningful participation of faculty in governance. Regardless of financial pressures, college and university leaders should maintain their commitment to collegial governance traditions.*

Presidents and senior administrators at the most successful colleges and universities did intrude in personnel matters. The effective officers, unlike those at less successful institutions, were more likely to contravene hiring, promotion, and tenure decisions made in faculty committees. This intervention was not arbitrary nor taken with insufficient cause. All successful administrators preferred positive actions. The officers offered symbolic and material rewards for professorial accomplishments. A problem at public institutions is that budget and collective bargaining rules tend to constrain administrative action. Several presidents at public colleges and universities circumvented this limitation through the creation of quasi-independent foundations. The foundations are corporately independent but their sole purpose is to aid and develop a public college or university. A major use of the income from these foundations is for faculty development and reward.

In spite of the reservations that have been expressed recently regarding institutional planning, *successful institutions in this study were much more likely to have highly developed plans and to rely upon them.* Effective administrators, especially at private institutions, used the long-range plans for framing and analyzing management decisions. Effective administrators in the public sector showed a greater sense of organization and more attention to data analysis than administrators in the less effective colleges, but the disparity was not as obvious as in the private sector. The reason is that administrators at private institutions are essentially dealing with an impersonal environment. They must collect information about the environment, analyze it, and disseminate the results within their organization. There is little else they can do to get ready for the future. Weather reports are not perfect but they help one prepare. In contrast, the "environment" of public colleges is more interactive -- with the state government taking the form of an organizational deity. All planning can go awry if the state capital decides on a budget cut. *Some organizational effort at public colleges may be usefully diverted from planning to convincing the state officials that rain in this season of the college's life would be particularly detrimental to the public good.*

Another observation that arises from these visits is that educational leadership can be more difficult at publicly supported colleges than at independent institutions. The faculty of private institutions more commonly perceive their institutions as at risk. They worry about tuition that they might not be able to afford for their own children. They are much more likely to accept program changes, budget cuts, and professional discomfort if the changes are perceived to be in the best interest of their institution. The president of a public college is likely to be viewed by the faculty as guardian of the budget. The president's job, from this perspective, is to maintain or increase the current level of public funding. He or she is not expected to disrupt significantly the operation of the college. If the budget of a public college is insufficient, the president is the first to be blamed. At each of two public universities with successful activist presidents, there was a harsh campus-wide recognition of institutional jeopardy before changes were forthcoming. In one case, tenured faculty were laid off by the previous president; in the other, the university's closing had been publicly announced. These situations created leadership legitimacy for the presidents. *System and public officials can assist presidents in their managerial efforts by clearly* *and directly communicating to college constituencies about public financial predicaments as they occur*. These officials, of course, should avoid interfering in campus affairs.

In the 1960s new students and new funds pushed American colleges and universities into new waters, and old programs were enriched and expanded. But now the era of growing resources for higher education has ended. Colleges and universities are no longer sailing downwind. Rather, the financial gusts are blowing in their faces. As unsettling as this fact is, the results of the study reported in this volume provide some encouragement. The findings indicate that with strong leadership and with careful charting of a course, colleges can beat to windward. Administrators must tend the rudder conscientiously, but, if the metaphor holds, the ride will be more exhilarating.

Recommendations for Administrators

- The declining proportion of the budget devoted to "instruction and departmental research" is a decade-long phenomenon. One reason for this reduction is that faculty salaries have not kept pace with inflation. Administrators and trustees must be vigilant in their efforts to maintain adequate faculty salaries. An institutional policy that allows research and service grants to pay salary supplements to professors serves a dual purpose. It encourages scholarship and service and raises the income of productive faculty. Administrators at private institutions should initiate such a policy. Their public counterparts may need to persuade state officials of the merits of such a program. Bonuses to the best teachers could be used to reward and encourage teaching excellence.

- In spite of financial pressures, college and university administrators should not abandon the traditional shared governance system. There is evidence that this abandonment is occurring. There is also evidence that autocratic decision making has a greater negative effect on faculty morale than does reduction in institutional finances or faculty salary levels. College administrators must maintain an open communication system with all constituents. On many campuses college faculty are unaware of the problems facing their institutions.

- The importance of shared governance notwithstanding, activist administrators can be very effective. Judicious intervention in personnel decisions is most appropriate. When possible, intervention should be positive in nature -- special recognition for outstanding scholarship, teaching, or service. Effective leadership may also require bold negative actions -- overturning faculty committee decisions, dramatically altering the standards for promotion and tenure, and breaking tenure commitments with due cause.

- In spite of recent cynicism about rational decision making, planning is not an outmoded concept. Careful attention to planning is particularly important for private institutions.

- Public college administrators are often shackled by line item budgets and other formal financial limitations. Officers at these institutions should help set up quasi-independent foundations. Income from these foundations provides a flexible source of funding which can be used for rewarding productive faculty, for seed money in new program initiatives, or for many other useful purposes.

- Under pressure to balance budgets, negotiate contracts, and keep institutional legal commitments, administrators can neglect the more subtle, but equally important issue of campus climate. Campus officials should objectively and regularly "take the pulse" of campus attitudes so that appropriate and timely corrective action can be taken. The IFI is one instrument that is suitable for this. Some college research officers may wish to devise their own survey.

- There are measured instructional and outreach benefits associated in the current "scramble" for students. College administrators, however, must minimize any negative consequences. One potential consequence is an over-emphasis on vocational programs. Others may include unethical recruiting, slipshod program development, or diminished educational standards.

- College officials should stand as a bulwark against the rising tide of vocationalism. An important reason for public support of colleges and universities is their commitment to the betterment of society. If colleges assume the role of two-year and four-year vocational institutions, public largess for higher education may diminish and more nearly approximate the support offered proprietary institutions.

- The decline and dilution of maintenance expenditures are a cause for modest concern on some campuses and are a cause for alarm at others. Campus officials must maintain the basic physical integrity of their campuses. There are, of course, many competing budgetary claims. Administrators at public institutions should document the need for increased maintenance expenditures and press the issue with state officials. Private institutions need to present their case to donors. In both sectors the faculty and other constituent groups need to be made aware of the long-term problems associated with deferred structural maintenance.

Recommendations for Public Officials

- During the 1970's, the source of funding for American higher education moved away from the campus to ever higher levels of government. Federal funds have replaced tuition at private institutions and replaced state dollars at public institutions. Local resources have become proportionately less significant and state resources more significant at public two-year colleges. In spite of their increased leverage, federal and state officials should resist the temptation to interfere in campus affairs. The nature of higher education -- highly trained professionals working independently -- inevitably brings a certain amount of waste. Attempts to eradicate all waste would simultaneously limit scholarly and instructional creativity. Public officials should look for funding mechanisms that limit the likelihood of direct interference. Portable student grants offer one approach to this problem.

- Family resources represent the largest realistic source of additional funds for colleges and universities. Higher education officials, working with Congress, should propose legislation that would allow parents to borrow from IRA's for college expenses without tax penalty.

- Public college presidents are in a particularly paradoxical position. State and local education officials want them to reduce educational expenditures while their faculty expects them to bring an even larger share of public funds. State and local officials can assist presidents in their duty as guardians of the public treasury by communicating the government's needs and constraints in more detail to the entire higher education community. When faculty better understand budgetary pressures, organizational and instructional change is easier to achieve.

- Faculty salaries declined significantly during the 1970's. Although at present there is no large exodus from college teaching, certain disciplines are unable to attract all the qualified teachers that are necessary. State officials should carefully review the salaries of public college professors to be sure that they are competitive in all disciplines. As advocated in the recommendations to college officials, state policy should allow for salary overrides for these professors with grants and contracts.

- While enrollments rose in public colleges and universities and in larger private universities, small private colleges had virtually stable enrollments during the 1970's. Although the less prestigious liberal arts colleges still exhibit a strong commitment to undergraduate learning and although faculty morale is still high, these institutions have not been able to build a financial reserve as have other private colleges. Public officials should carefully monitor and assess the vulnerability of all private institutions, especially the small liberal arts colleges, as the competition for enrollment grows in the 1980's.

CHAPTER ONE
THE STUDY

It is commonly perceived that the 1970's were a time of restricted resources for higher education and that the 1980's and 1990's are likely to be decades of true penury. Titles of two monographs published by a leading higher education association reflect this evolving perception. In 1974, the American Association for Higher Education (AAHE) published *Higher Education and the Steady State.*[1] The authors, Leslie and Miller, argue that colleges and universities will have to prepare for the end of growth. Five years later AAHE published Mortimer and Tierney's *The Three "R's" of the Eighties: Reduction, Reallocation and Retrenchment*[2] which presented a much grimmer prognosis. As a consequence of this increased fiscal concern and anxiety, a great deal of research has focused on evaluating the financial health of colleges and universities. The models for these analyses are typically borrowed from the profit-seeking sector; specifically, the tools of corporate financial analysts have been adapted for use in higher education. This corporate financial analytic approach is certainly useful. When applied to non-profit organizations, however, it is structurally inadequate and potentially dysfunctional. This is so because of the difference in goal orientations between the profit and non-profit sectors.

American corporations have the avowed goal of producing a profit. They raise capital with the intent of making it grow and enriching their shareholders. The results of these corporate efforts are expressed in financial terms, generally as a ratio of output to input. Measures such as return on investment, earnings per share, and related trend data have singular significance to the profit-seeking organization. These statements are not intended as argument that the financial analysis of corporations is a simple-minded science. Although the profit-to-equity measures are relatively straightforward indicators of past performance, they are less significant for predicting future performance. To predict future performance, estimates of risk must be considered. To estimate risk a variety of measures are used including evaluation of product, management, competition, and other external forces. Nevertheless, corporate management and the financial community carefully follow the basic fiscal data (sales and return on investment) and pass judgment on the health of companies or industries. Similarly, the government can set policy based on its interpretations of the financial figures.

---

[1] Larry L. Leslie and Howard F. Miller, Jr. *Higher Education and the Steady State* (Washington, D.C.:American Association for Higher Education, 1974).

[2] Kenneth P Mortimer and Michael L. Tierney *The Three "R's" of the Eighties: Reduction, Reallocation and Retrenchment,* (Washington, D.C.:American Association of Higher Education, 1979).

Non-profit organizations, including public and private colleges and universities exist to deliver services to the public. Their goal is to deliver the highest quality services at the lowest cost. Unlike their profit-seeking cousins, there are no clear measures of effectiveness. One reason is that outputs and inputs are not in the same denomination. As a result of this discrepancy, ratios of one to the other lack independent meaning. If a college expends $4000 per student, there is no way to assess whether this is high, low or moderate without knowing a good deal more about the college's goals, programs, and other characteristics. Moreover, all evaluations must be balanced on a scale of personal or legislative concern. Medical education is much more expensive than legal education. Remedial instruction is more costly than many other forms of education. Where and how institutions spend their funds must be determined by legislators, trustees, administrators and their constituents. The final cost-effectiveness determination is inherently a value decision.

Though in the long term, it is undeniably true that incoming resources must equal or exceed the resources consumed. This financial information is necessary but insufficient to evaluate the health of the non-profit organization. Indeed, *it makes little sense to talk independently about the financial health of non-profit organizations*. Their health is determined by their ability to effectively carry out their mission. In spite of this, public policy makers are showing increasing interest in "financial health." Farmer hints at the problems inherent in this effort: "One of the key uses of (financial) data over the next few years will be to provide 'financial indicators' and to give institutions the means to compare their condition to similar institutions. *As often is the case, financial indicators may be asked to bear a burden that is at best uncomfortable and at worst intolerable*"[3] (emphasis mine). The use of near-financial measures, like enrollment, for determining institutional health also tends to ignore the more fundamental issue of goal achievement. Deitch asks the question directly: "To what extent will education's financial difficulties impair the sector's ability to accomplish its principal functions of learning and teaching?"[4]

---

[3] James Farmer, "Agenda for 1979" *Measuring the Financial Conditions of Colleges and Universities* (Washington, D.C.: American Council on Education, 1979) p. 161.

THE REPORT

This report is a product of a study of the changes that took place at ninety-three public and private colleges and universities during the 1970's. The report and the research upon which it is based, have several areas of inquiry. Chapter two reports an evaluation of financial trends in American higher education during the decade. Changes in college functioning, as perceived by faculty, are presented in Chapters three and four. Chapter five attempts to relate the changes in finance to changes in functioning. In essence, this chapter tests the assumption that institutions with reduced resources will be less effective. In addition, Chapter six reports on visits to thirteen colleges and universities that participated in the study. These visits add texture to the analysis as well as providing alternative explanations for college success or failure. Chapter seven summarizes the findings.

THE COLLEGES AND THE INFORMATION THEY SUPPLIED

In 1980 ninety-three institutions agreed to participate in a study of the financial and educational trends in American higher education. The investigation employed a tripartite methodology. Complete financial and other statistical data were gathered for five academic years: 1967-68, 1970-71, 1973-74, 1976-77, and 1979-80. Each institution in the study administered a standardized instrument to a sample of faculty (in some cases to their entire faculty) in two time periods. The first period of faculty surveys was near the beginning of the 1970's and the second period was between 1979 and 1981. In addition, thirteen colleges were visited. These visits assisted the project staff in interpreting statistical data and added contextual information for this report. This report is based on the results of that study, and this chapter explains the information that was gathered.

The Sample

Educational Testing Service's Institutional Functioning Inventory (IFI) is a survey used to gauge campus climate and operations. Because it was important to have baseline data on all participating institutions, only the 220 colleges that had used the standardized IFI between 1968 and 1974 were eligible to be included. Each was asked if it would be willing to participate, and 125 agreed (57%). The sample was reduced for two reasons. Budgeting constraints limited the number of colleges that could be included, and, in some cases, close inspection showed the early IFI data to be unusable. The final sample consists of ninety-three public and private colleges and universities. They are listed in Appendix A, using the Carnegie Classification of 1976.[5]

---

[4] Kenneth Deitch, *Some Aspects of the Economics of American Higher Education* (Cambridge, Massachusetts: Sloan Commission on Government and Higher Education, 1977) p. 131.

Most groups of institutions are well represented. There are six public research and doctoral institutions, four of which are flagship institutions. Nineteen public comprehensive colleges participated as did ten public community colleges. Fifty-eight private colleges and universities are in the sample, of which fifty-three are comprehensive universities or liberal arts colleges. Only three private research universities had used the IFI during the baseline time period. The sample of two in this category, therefore, is understandable but still inadequate. Names have been omitted from this group in Appendix A to insure the promised confidentiality. Enrollments at private research and doctoral institutions account for only 6 percent of all college enrollments in 1975; but the influence of these institutions is far greater than their enrollment share. The number in this sample cell is a significant constraint of the study. There are only three private two-year colleges in the study. The same problem that occurred in creating the sample of private research universities prevailed. Yet, as a group, these institutions enroll a far smaller percentage of students than the universities and are much less influential.

Of the ninety-three institutions, 35 percent are located in the Northeast, 42 percent in the North Central states, 15 percent in the South, and 8 percent in the West. The Northeast and North Central states are somewhat over-represented, as shown in Table 1-1.

Weighting the Results The results of most of the analyses were weighted so that the final results better project national trends. The weights used are by sector and Carnegie Classification, and are based on the percentage of students enrolled in 1975-76. For example, private doctoral research universities account for 6 percent of all enrollments but only 2 percent of this sample. The statistical procedures were weighted so that the data of this group have the equivalent effect of 6 percent of the sample.

Within sector and Carnegie Classification no weighting was required. Enrollment change reported for public community colleges, for example, is simply the numerical average of enrollment changes at the ten institutions in the sample.

---

[5] *A Classification of Institutions of Higher Education* (New York: The Carnegie Foundation for the Advancement of Teaching, 1976).

Table 1-1: Geographic Distribution of the Sample

	Percent of Sample	Percent of All Institutions
Northeastern States	35%	25%
North Central States	42%	27%
Southern States	15%	32%
Western States	8%	16%
	100%	100%

Financial Data and Analyses

This section is entitled *Financial Data and Analyses* but the term "financial" is given a broad meaning here and includes personnel and enrollment data. Indeed, all institutional summary statistics except the IFI have been categorized as "financial data" and are included in this section. Unless otherwise noted, data were collected for the 1967-68, 1970-71, 1973-74, 1976-77, and the 1979-80 academic years.

Personnel Data The National Center for Education Statistics' (NCES) Higher Education General Information Survey (HEGIS) report of Salaries, Tenure, and Fringe Benefits of Full-Time Institutional Faculty was the main source of data of this section. This survey is used to generate data on salaries and number of faculty. Because NCES did not collect these data in 1973-74,none are available for that year. There were some significant changes on the form from the first to the last year of the study, but the data were re-worked to create consistent statistics for each year. For example, salary information was in various forms. In this study, "average salary" is determined by averaging the average assistant professor's salary, the average associate professor's salary, and the average full professor's salary. To the extent that faculty have aged (i.e., the ratio of full to assistant professors has risen over the decade), the trend of this statistic will understate the trend in the average faculty member's salary. However, the trend of this statistic will accurately reflect changes in how competitive faculty salaries are with respect to salaries in other occupations. Salary trend data for professors and other professionals from the American Association of University Professors were used to supplement the salary analysis.

The participating colleges were also asked to supply information on faculty workload policies for 1970-71 and 1979-80. Workload is defined as the number of classes professors are required to teach each year.

Student Data Enrollments were determined using HEGIS data. The number of full-time equivalent students (FTE's) was determined by adding one-third of the part-time head count to the full-time headcount. Institutions also supplied information on the number of freshman applications, acceptances, and the matriculation rate. In addition, institutions supplied SAT and ACT scores. ACT scores were converted to SAT score equivalents using a concordance table published by Chase and Barritt.[6] There are some problems with this conversion,[7] but they are largely theoretical and unimportant for this type of application.

Financial Data There were three sources of financial information in this study. NCES's HEGIS Financial Statistics of Institutions of Higher Education was the primary one. Other data came from institutional financial reports and also from direct questions of financial officers. All income and expenditure data are expressed in constant 1979-80 dollars. Although the HEGIS financial reporting categories are not consistent from the early years to the latter years, great care was taken to ensure data comparability even at the expense of detail. For example, the 1971 and 1974 HEGIS expense reports included "libraries" but not "academic support," "student support," or "general institutional support." These items are included in "other educational and general." As a result, these categories of expense data for each year are aggregated in the "other" category. In some cases, there was no obvious aggregate category. The separate listing of "student aid revenues" in 1968 is an example. In these cases, the staff consulted the college's full financial report to determine how consistency would best be served. These classification problems notwithstanding, most of the categories are consistent from year to year with reliability of items improving in the latter years.

Institutions were also asked to supply either fund balance and transfer data or full financial reports. Most chose to send the financial reports. In addition, the colleges were asked specific questions about state scholarship data, the inclusion of BEOG funds in their scholarship expense data, and institutional tuition levels.

If a university had a hospital and a medical school, all these financial data were eliminated from their reports because these expenses are so large that they distort comparisons. In addition, respondents were asked to comment on structural and/or financial changes that could affect the consistency of our data using these responses. We were thus able to make additional corrections to the data base. For example, upon learning that a divinity school had been included in the enrollment and financial statistics of one university for 1968 and 1971 but not for later years, we were able to make appropriate adjustments and restate all data.

---

[6] Clinton I. Chase and L. Spencer Barritt, "A Table of Concordance between ACT and SAT" *College Student Personnel*, Vol. 7, No. 2, 1966.

[7] E. James Maxey and Oscar T. Lenning, "Another Look at Concordance Tables between ACT and SAT," *College Student Personnel*, Vol. 15, No. 4, 1974.

IFI Data

The IFI was developed by ETS and the Institute for Higher Education at Teachers College in the late 1960's to provide "a means by which a college or university can describe itself in terms of a number of characteristics judged to be of importance to American higher education".[8] There are 132 items on the IFI which form eleven scales (twelve items for each scale). Scale scores range from 0 to 12 and the institutional scale scores are created by averaging the scale scores of the individual respondents. The items and the associated scales are listed in Appendix B.

The definitions of the scales are given in Table 1-2.

Table 1-2: IFI Scale Definitions

INTELLECTUAL-AESTHETIC EXTRACURRICULUM refers to the availability of activities and opportunities for intellectual and aesthetic stimulation outside the classroom. Colleges with high scores are characterized by their deliberate efforts to encourage intellectual and artistic interests through appearances by leading intellectuals, informal discussion groups, student literary productions, art exhibits, musical presentations, and so forth. Low scores would mean a relative absence of extracurricular opportunities of an intellectual and aesthetic nature.

FREEDOM has to do with academic freedom for faculty and students as well as freedom in their personal lives for all individuals in the campus community. High scores imply that respondents perceive themselves to be essentially free to discuss topics and organize groups of their own choosing, to invite controversial speakers, and to be relatively free of college restrictions on their personal conduct and activities. Low scores suggest an institution that places many restraints on the academic and personal lives of faculty and students.

HUMAN DIVERSITY has to do with the degree to which the faculty and student body are heterogeneous in their backgrounds and present attitudes. A high score indicates that the college is viewed as having attracted students and faculty of diverse ethnic and social backgrounds, of diverse political and religious attitudes, and of diverse personal tastes and styles. A low score suggests a campus community that is relatively homogeneous in terms of faculty and student backgrounds and beliefs.

---

[8] Richard E. Peterson, John A. Centra, Rodney T. Hartnett, and Robert L. Linn, *Institutional Functioning Inventory Preliminary Technical Manual* (Princeton, N.J.: Educational Testing Service, 1970) p.1.

CONCERN FOR IMPROVEMENT OF SOCIETY refers to a desire among people at the institution to apply their knowledge and skills in solving social problems and prompting social change in America. A high score implies that many faculty wish to, and do, consult with governmental agencies on social and economic matters, that programs dealing with contemporary social problems exist on campus, that campus authorities are committed to the view that the institution should be actively engaged in working to improve social conditions. Low scores imply some combination of disinterest, parochialism, or conservatism in relation to the existing American social order.

CONCERN FOR UNDERGRADUATE LEARNING describes the degree to which the college -- in its structure, function, and professional commitment of faculty -- emphasizes undergraduate teaching and learning. A high score suggests a faculty generally disposed toward personalized teaching of undergraduates, encouragement of active student involvement in the learning enterprise, and institutional rewards for good teaching. A low score indicates either that undergraduate instruction stands relatively low as an institutional priority, or else the perception that, for whatever reasons, the quality of teaching at the college is generally somewhat poor.

DEMOCRATIC GOVERNANCE reflects the extent to which individuals in the campus community who are directly affected by a decision have the opportunity to participate in making the decision. High scores signify extensive and meaningful faculty and student involvement in institutional affairs, decentralized decision making, and shared (horizontal) rather than hierarchical (vertical) organizational arrangements. Low scores suggest authoritarianism--authority and power tightly held, typically by an administrative clique, in a "top-down" administrative framework.

MEETING LOCAL NEEDS refers to an institutional emphasis on providing educational and cultural opportunities for all adults in the surrounding area, as well as meeting needs for trained manpower on the part of local businesses and government agencies. High scores indicate availability of adult-education, job-related, and remedial curricula; operation of job-placement and vocational-counseling services; accessibility of the campus to commuters; and so forth. Low scores indicate a low priority, usually reflecting traditional purposes and functions, given to meeting local area needs.

SELF-STUDY AND PLANNING has to do with the importance college leaders attach to continuous long-range planning for the total institution, and to institutional research needed in formulating and revising plans. High scores reflect the perception that long-range planning is a high-priority activity for college officials; that a long-range plan for the institution currently either exists, is being developed, or is being reformulated; and that relevant institutional self-studies are periodicaly conducted. Low scores indicate a perceived lack of systematic long-range planning and pertinent self-study.

CONCERN FOR ADVANCING KNOWLEDGE reflects the degree to which the institution -- in its structure, function, and professional commitment of faculty -- emphasizes research and scholarship aimed at extending the scope of human knowledge. High scores signify heavy faculty engagement in scientific research, institutional rewards for academic productivity, and high institutional priority for knowledge-producing activities in general. Low scores indicate a low priority, usually reflecting traditional college purposes, given to research and scholarship.

CONCERN FOR INNOVATION refers, in its highest form, to an institutionalized commitment to experimentation with new ideas for educational practice. A high score reflects the view that senior administrators are receptive to new ideas, that people are encouraged to innovate and experiment at all levels, and that significant changes, in the curriculum, for example, have, in fact, been made in recent years. Low scores could imply traditionalism, complacency, or opposition to change in the college community.

INSTITUTIONAL ESPRIT refers to a sense of shared purpose and high morale among faculty and administrators. High scores reflect a feeling of genuine community (as commitment to shared objectives), loyalty to the institution and satisfaction with its work, open and honest communication among faculty and administrators, and respect for the competency of administrative leaders. Low scores suggest antagonism among and between faculty and administrators, low faculty estimate of the worth of the college, and poor morale in general within faculty and administrative ranks.

Definitions extracted from the IFI Technical Manual.

Reliability and Validity The reliability and validity of the scales are discussed at some length in the *Institutional Functioning Inventory Preliminary Technical Manual*. The alpha coefficients for faculty ranged from 0.86 to 0.96. These statistics suggest that the scales are indeed quite reliable.[9] Validity is more difficult to establish. ETS used three methods. One was to correlate the scales with other measures to see if the definitions of the scales would predict the correlations. Another was the "multigroup-multiscale matrix," which tests if the scale scores of different groups are more closely related than different scale scores within groups. Finally, ETS examined the scale scores of specialized institutions to see if the IFI profiles would be predicted by the scale definitions. All three methods supported the validity of the IFI scales.

---

[9] *Ibid.*, p.16.

The Norms ETS originally established norms for the scales in 1968 based on the results of a sample of thirty-seven institutions. Blank charts are available to plot scores with comparison to the original norms. Although new norms have been established the chart paper is based on the original norms. Institutional scores were plotted on these charts with percentile rankings from the normative data forming the vertical axis of each scale. There are advantages and disadvantages to this method. One positive feature is that it offers a reference for understanding the results of an IFI survey. The disadvantage is that the norms on the chart paper are certainly out of date at this time and should not be considered as current norms.

Procedures for Readministration We instructed each campus to administer the IFI at approximately the same time during the academic year as the first administration of the IFI and to administer it to a sample of faculty as similar as possible to the first administration. We used only the responses of full-time faculty for the base-line scoring and for the later scoring. If administrators or students were included in the first survey, they were excluded and the responses were rescored.

The sampling procedure was to survey 20 percent of all full-time faculty. However, no fewer than 60 and no more than 150 surveys were sent to each campus in 1980-81. The final sample of full-time faculty consisted of 6905 in the first administration and 5113 in the last administration, averaging 74 and 55 faculty per campus, respectively.

Year of the Original IFI The dates of the original IFI ranged from the 1968 to the 1974 academic year. Almost 90 percent of these data were collected between 1968 and 1972. The second administration of the IFI occurred in 1980-81 at all institutions except five. These five collected follow-up data on their own in 1979-80 before the study began. The average time interval between the first and second administration was 9.5 years.

President's Assessment The eleven scales are certainly not of equal importance to all institutions. Community colleges are likely to be more concerned about the Meeting Local Needs scale than other institutions. Similarly, liberal arts colleges may focus special attention on Concern for Undergraduate Learning, and research universities on Concern for Advancing Knowledge. We asked the president of each institution, therefore, to review the scales and their definitions and to assess the relative significance of each to his/her institution. We assigned mathematical weights to the presidential assessments and created a *Weighted Scale* score. This Weighted Scale score is an average of all eleven scale scores but counts each scale differently depending upon its perceived importance to the current president. The Weighted Scale is especially useful in evaluating overall change.

The presidents were asked to make their assessments before they saw the results of the 1980-81 IFI, and this procedure eliminated one source of potential bias. However, it is possible that the president in office in 1980-81 had a set of goals that differed significantly from those of the earlier administration. If a college was equally successful in both time periods and if the IFI accurately gauged that success, the Weighted Scale score, reflecting the goals of the later time period, would rise. As a result, changes on the Weighted Scale tend to be biased in the positive direction.

Summary

The data base for this report on American higher education is a careful compilation of survey data of faculty members' perceptions, of institutional financial, personnel, and student data for the period 1968 to 1981, and of interview data collected from thirteen college visits. Ninety-three institutions participated. Although there were too few private research universities, other institutional groups are adequately represented.

CHAPTER TWO
FINANCIAL TRENDS

> "Hard times are producing nothing less than a complete change in the character of our institutions of higher learning. Every aspect of their work is being affected. Their faculty, their students, their organization, their methods, their teaching, and their research are experiencing such alteration that we who knew them in the good old days shall shortly be unable to recognize them. Many of these changes are for the better. Others may wreck the whole system."[10]

The author of the above quote, writing about a study of leading public and private institutions, points out that "capital expenditures of these seven universities have stopped or are stopping".[11] He also points out that maintenance and administrative expenditures have been curtailed, that faculty vacancies have been left unfilled, and that faculty salaries have been under severe pressure.[12] The report was by Robert Hutchins in 1933 and it appears that we have come full cycle. Once again college and university budgets are squeezed. Additions to plant are greatly curtailed. Salaries and maintenance expenditures are reduced in real terms as shown in our analyses.

This chapter is divided into three sections. The first reviews enrollments and student demand. The second analyzes operating revenues and expenditures. The last section reviews debts, fund balances, and related ratio analyses for private institutions.

---

[10] Robert Maynard Hutchins, "Hard Times and the Higher Learning," *Yale Review*, Vol. 22, 1933, p. 714.

[11] Ibid. p. 714.

[12] Hutchins, pp. 716-718.

DEMAND

The demand for services from higher education can be subdivided conceptually into a number of components including (1) student demand for degrees as evidenced by enrollment and related data, (2) public and private demand for research and (3) demand for other services. Although each of these components is important, the demand by students for an education is clearly the most significant financially. Over 80 percent of the Educational and General income of the colleges in this sample came from tuition and state and local payments related to student enrollment. As a consequence, this section examines only enrollment and related data.

Enrollment

Chart 2-1 displays the enrollment patterns for all ninety-three colleges and universities in the study. Private and public colleges are drawn with solid and dotted lines respectively. The grand total is shown with a heavy black line. As explained in Chapter One, the grand totals and sector totals are weighted averages based on 1976 enrollments. The patterns are well known.

At most public institutions, enrollments rose rapidly in the late 1960's and early 1970's. Growth slowed in the middle 1970's and tapered off to virtual stability in the last three years of the decade. Public research universities absorbed the largest number of new students but community colleges had the largest percentage growth--85 percent over twelve years. The sample of public two-year colleges showed a 3 percent dip in enrollment during the last three-year period. This decline may not be typical of all public two-year colleges, but it is not extraordinary. The National Center for Educational Statistics reported a one percent decrease in FTE enrollments per institution from 1977 to 1978 and then a 4 percent increase from 1978 to 1979.[13] The small private colleges on the bottom of the chart exhibited relatively stable enrollment over the decade. Larger private institutions experienced somewhat greater enrollment gains.

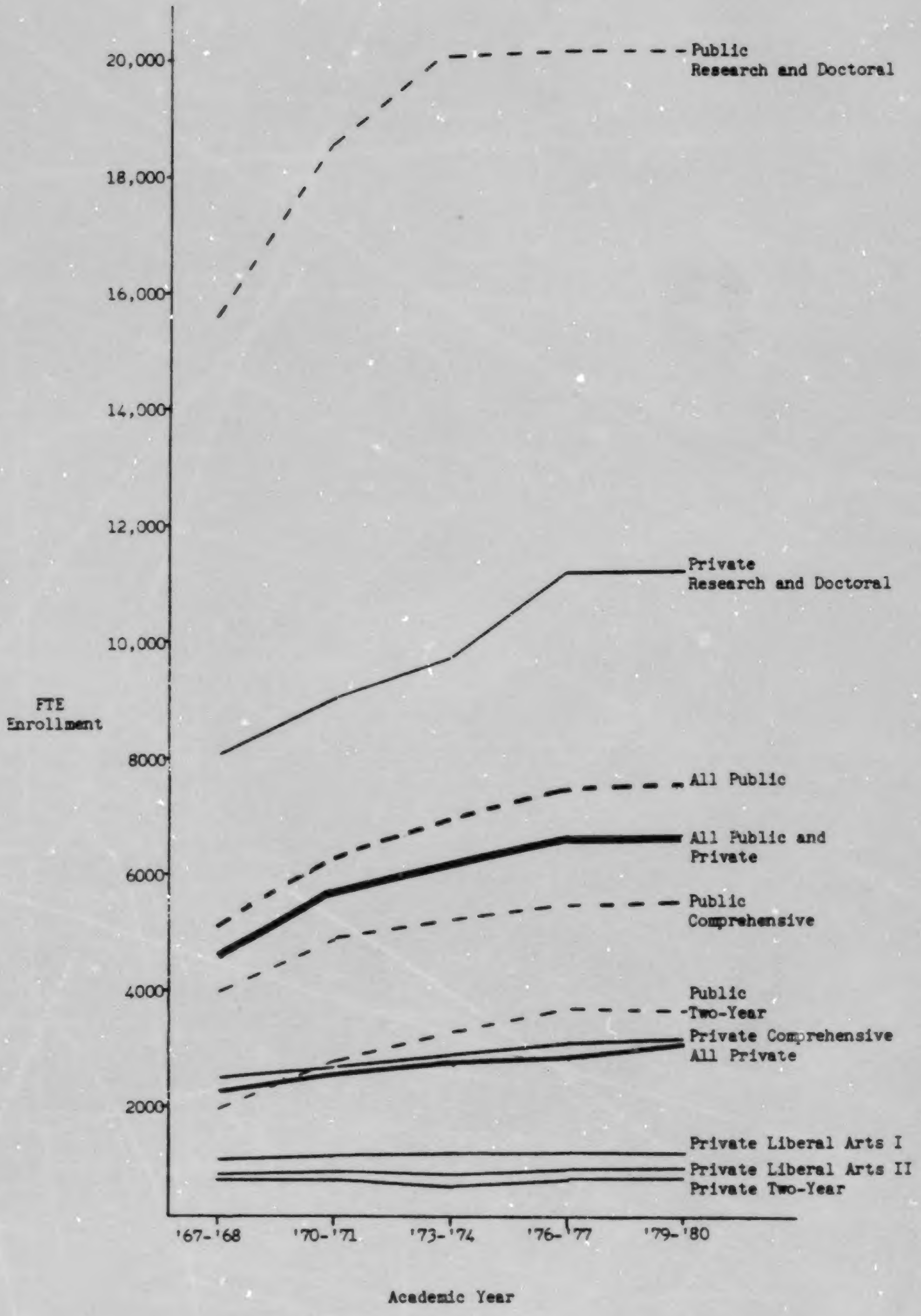
Percent of Freshman Applications Accepted

The number of students enrolled does not tell the complete "demand" story. Administrators at many colleges are as concerned about who attends as they are about how many attend. The value of a college's credential often depends upon its ability to attract capable students. Charts 2-2 and 2-3

---

[13] Vance Grant and Leo J. Eiden, *Digest of Education Statistics, 1981* (Washington, D.C.: National Center for Education Statistics, 1981) pp. 89 and 116.

Chart 2-1: Average FTE Enrollment



display the trends in the percent of applications accepted at four-year public and independent colleges and universities respectively. These statistics are important because they provide a measure of reserve demand. If a college has had stable enrollment but is admitting only a small percent of its applicants, its tuition income is probably quite secure for the near future. Most of the two-year colleges in both sectors had open admissions policies and are not included.

The percent of applicants admitted to public comprehensive colleges, as shown on Chart 2-2, increased from 75 percent to 86 percent in the first six years and then rose gradually to 88 in the last six years. The public research and doctoral institutions were apparently more stable in their admissions policies. The percentage of applicants accepted increased at most private colleges between 1968 and 1974. Contrary to the general trend, private colleges as a group, and specifically the Liberal Arts II colleges admitted a lower percentage of applicants at the end of the decade than in 1973-74. The two private research universities show a rapid decline in the percent admitted, but the sample is very small. Minter and Bowen also report a decline in the percent admitted for all private institutions between 1974 and 1980.[14]

Yield

Yield is defined as the percent of accepted students that attend, and it is an important comparison indicator with "percent accepted." A high percent of students accepted is not necessarily troublesome if most of these admitted students attend or if the yield statistic is, at least, stable. Public four-year institutions show a steady and significant decline in yield as displayed in Chart 2-4. Yields at four-year independent colleges on the other hand have declined more slowly. Chart 2-5 shows Liberal Arts II colleges to be somewhat exceptional as yields increased temporarily between 1974 and 1977.

SAT Scores

Charts 2-6 and 2-7 display the trends in SAT scores for four-year public and private colleges respectively. The national average SAT scores for all test takers is also shown with a broken line on each chart. Very little discussion is required as it is apparent that the sample institutions uniformly followed the national trends. As a group the students attending the sample colleges had higher average SAT scores than all test takers. What explains this discrepancy is the fact that some test takers did not attend college and

---

[14] W. John Minter and Howard R. Bowen, *Independent Higher Education: Fifth Annual Report* (Washington, D.C.: National Institute of Independent Colleges, 1980) p. 11.

Chart 2-2: Average Percent Accepted: Public Institutions

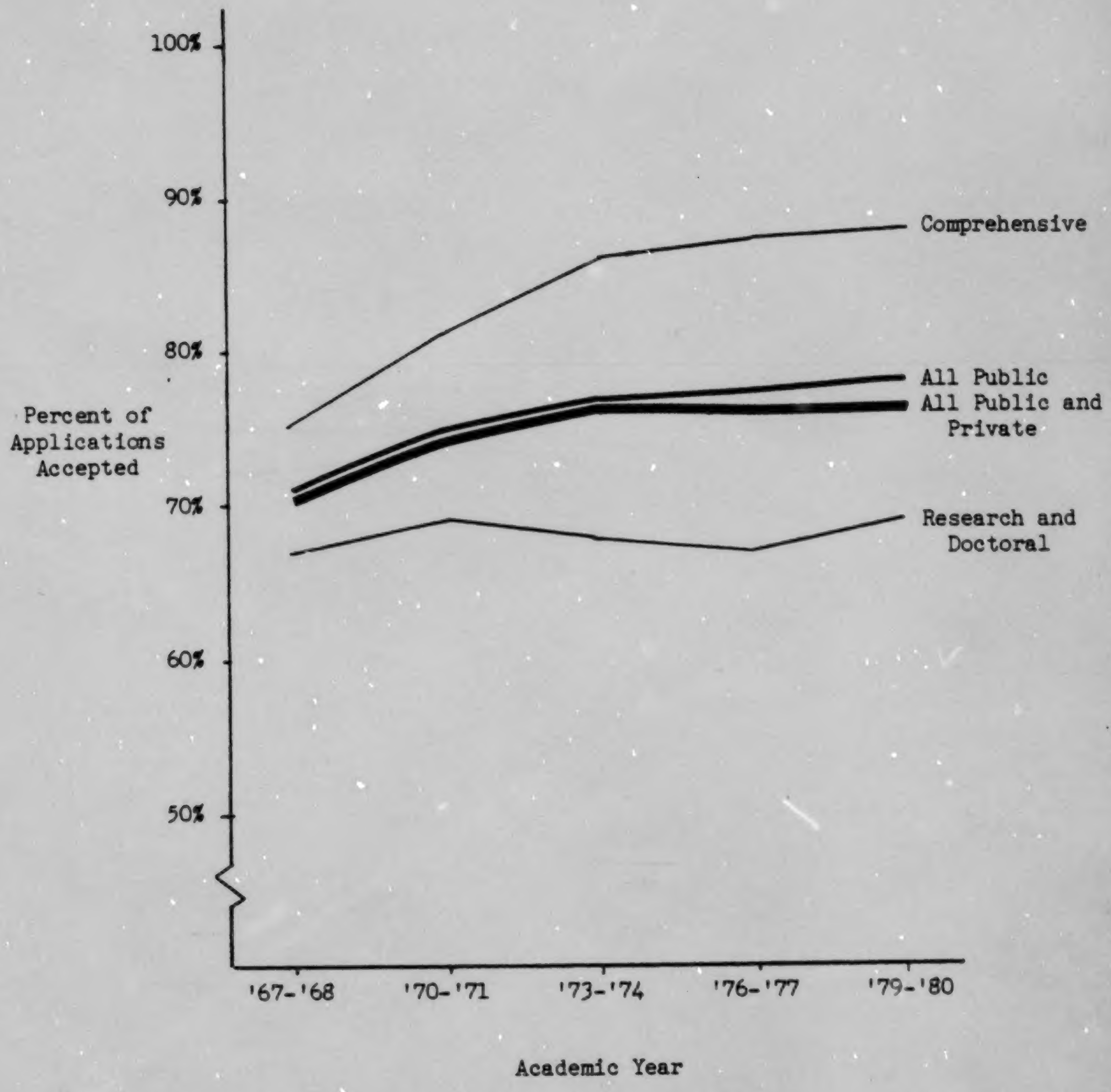


Chart 2-3: Average Percent Accepted: Private Institutions

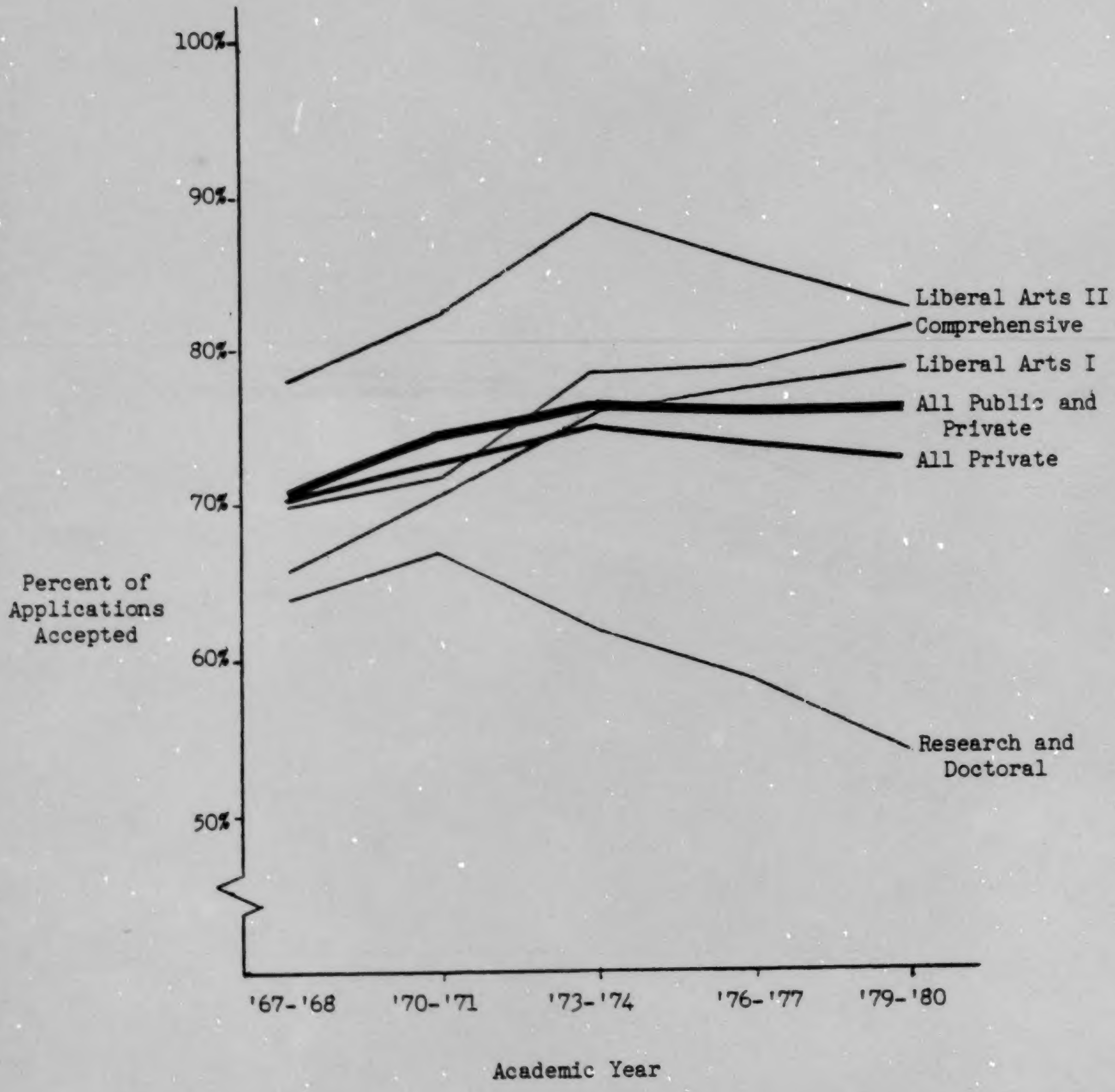
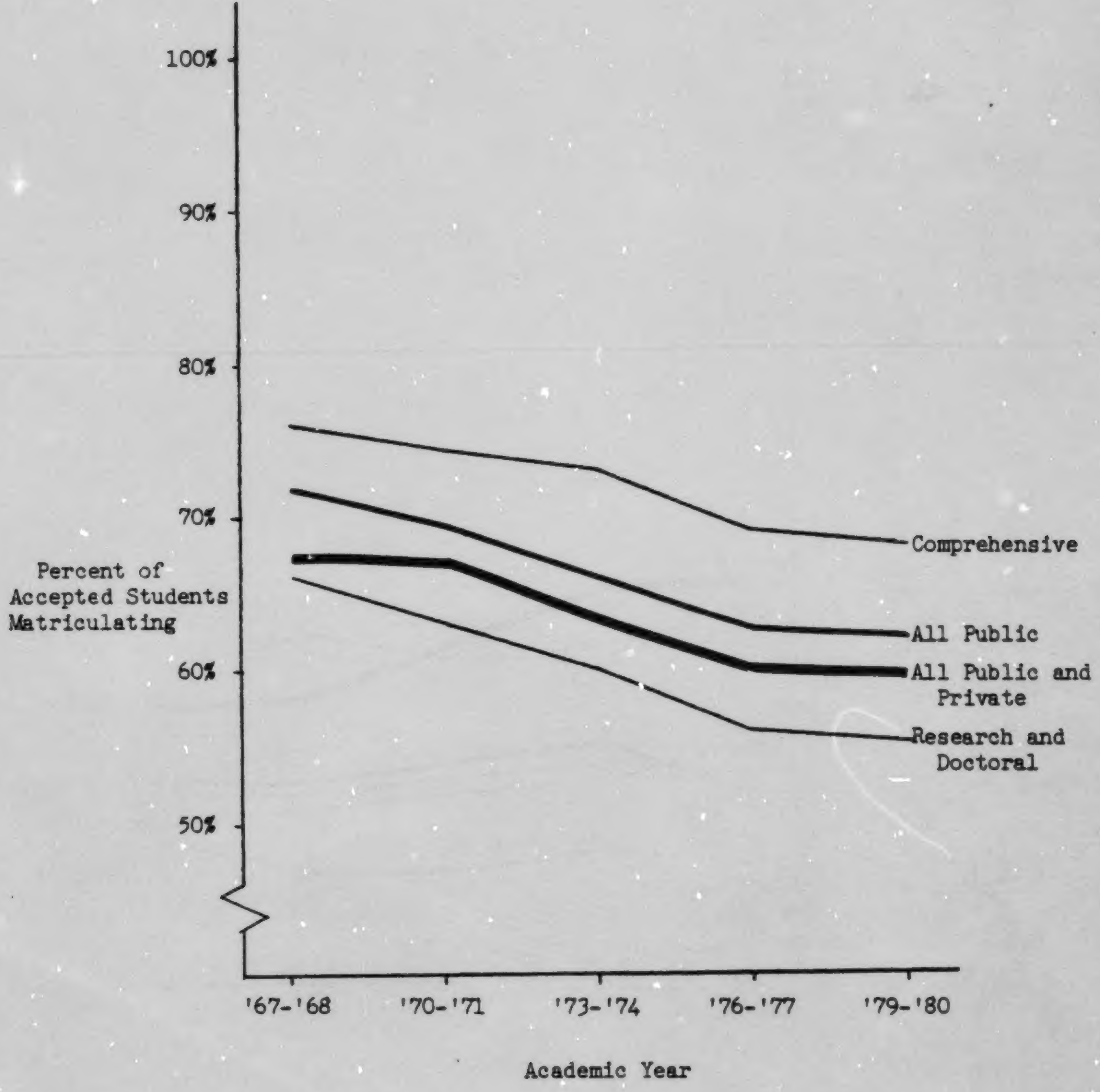


Chart 2-4: Average "Yield": Public Institutions



38

Chart 2-5: Average "Yield": Private Institutions

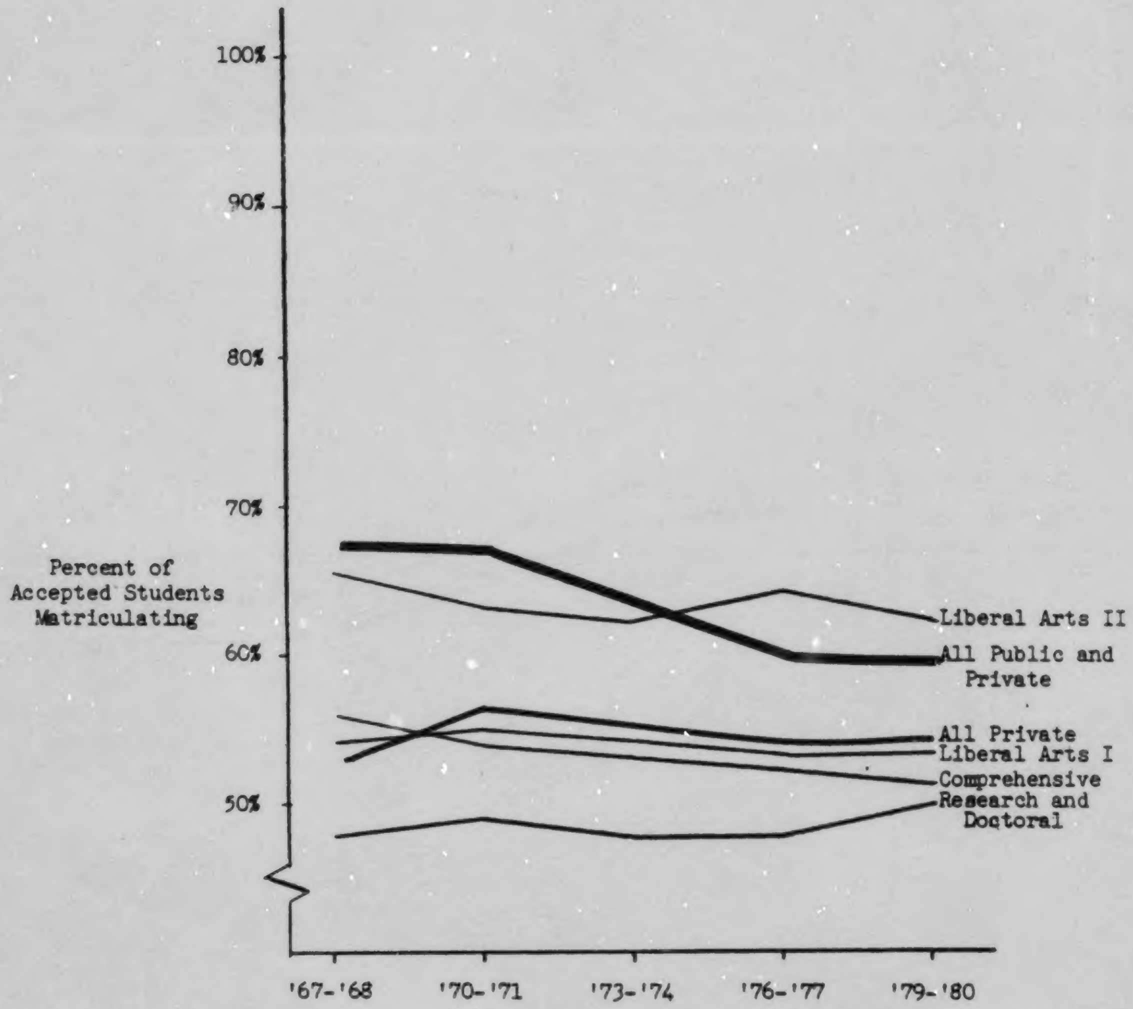


Chart 2-6: Average Entering SAT Scores: Public Institutions

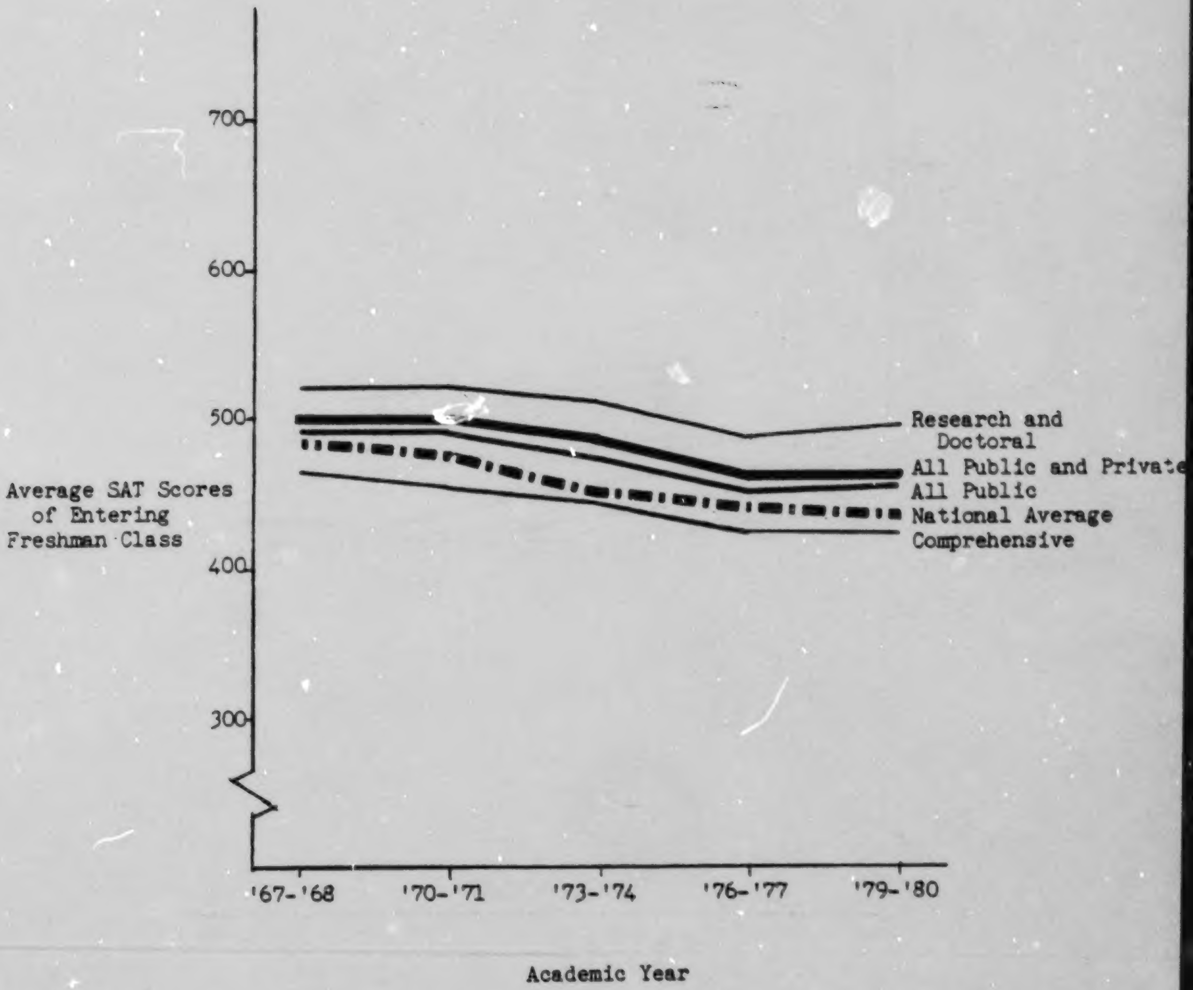
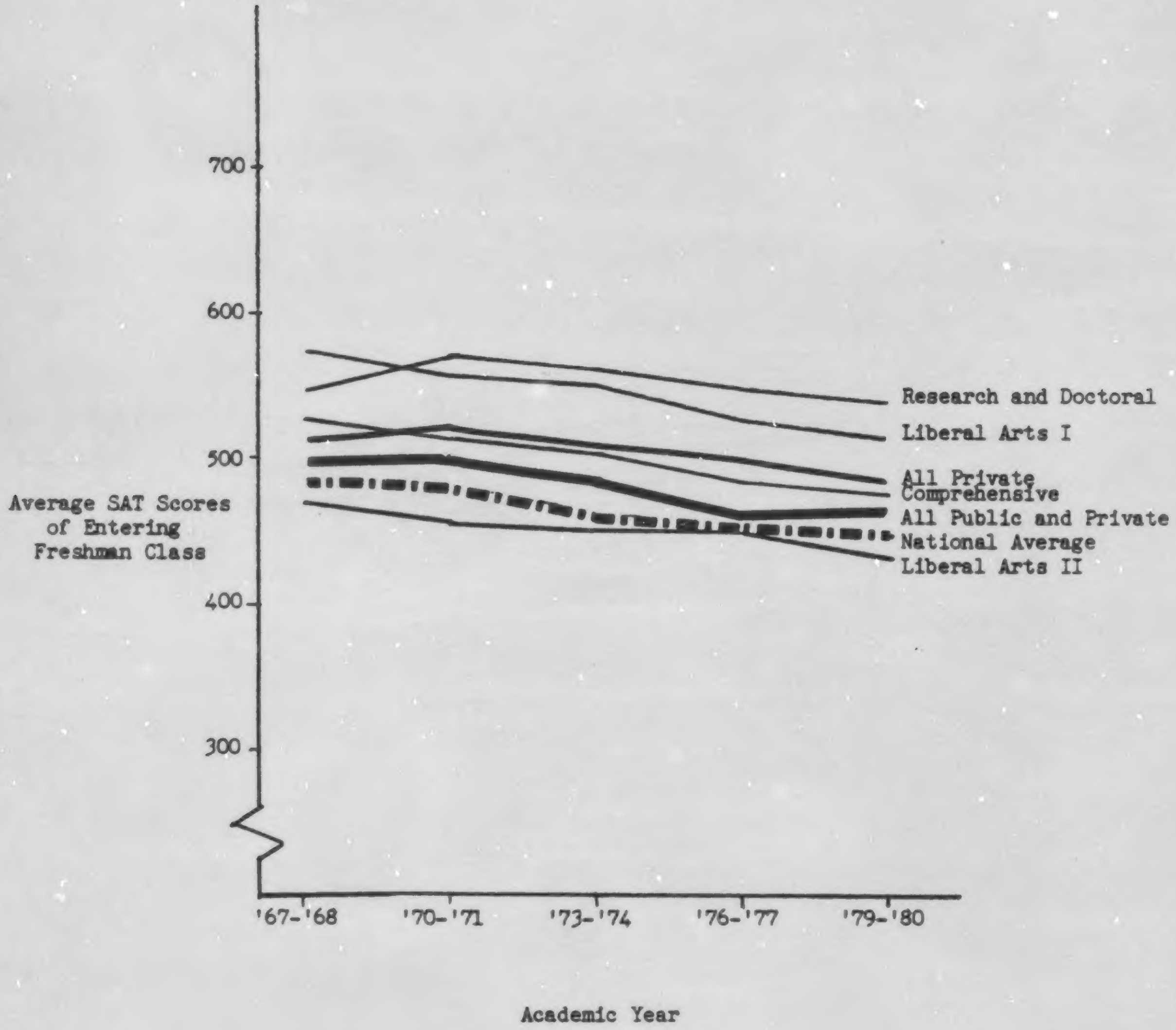


Chart 2-7: Average Entering SAT Scores: Private Institutions



that some attended two-year colleges, which could not report this information.

INCOME AND EXPENDITURES

Charts 2-8 through 2-18 serve as financial summaries as this section reviews the operating income and expenditures of the participating institutions. The left-hand figure shows the trends in percentages of educational and general income. Below that graph are the actual averages of educational and general revenue per institution (in constant 1980 $1000's). These dollar figures show the changes in available resources, after inflation, over the twelve-year period. Auxiliary income and total current fund income are also shown. The emphasis of the charts, however, is on educational and general funds. The right-hand graph shows the percentage composition of educational and general expenditures. The dollars *per student* expended in the educational and general, auxiliary and current fund categories are similarly listed below the figure. The reader is reminded that the trend in educational and general expenditures per student shows changes in the resources expended for each student's education as well as for related (and perhaps unrelated) research and public service.

The income and expenditure categories of each figure are not uniform for all charts. If a category was too insignificant to graph, it was combined with another listing. For example, state and local income are given together for all groups except public community college; local income is so important to these institutions that it is shown separately.

Those familiar with current fund expenditure categories will note the absence of the categories of "student services" and "institutional support" and "academic support." As discussed in Chapter one, the earlier HEGIS surveys did not collect and report data for these categories. Rather than trying to reconstruct these categories -- expenditure areas for which the boundaries are not easily defined -- we aggregated them together under the title "other." *"Other" expenditures, therefore, may be generally interpreted as an all-encompassing proxy for administrative and support costs.*

Surpluses and deficits are not reported on these charts and, indeed, such calculations were used only sparingly in the analyses. One reason is that HEGIS forms did not request any fund transfer information until 1977 and without this information, it is impossible to even speculate on budgeting imbalances. Moreover, even with transfer data, reported surpluses and deficits are quite arbitrary within the rules of fund accounting. The American Institute of Certified Public Accounts (AICPA), which provides guidelines for college and university auditors, declines to define surplus or deficit. The corresponding item in the AICPA guidelines is innocuously labeled: "Net increase (decrease) in fund balance."[15] Financial distress (or affluence) if it exists, will show in other ways -- e.g., salary levels or changes in expenditures per student.

Trends for the Full Sample

The educational and general income data listed below the left-hand figure of Chart 2-8 show a large (17%) growth in the first three-year period followed by more modest income growth. Enrollments were also rising during the period. As a result the changes in educational and general expenditures per student displayed below the right-hand figure, are up and down, but the fluctuations are not very large. The resources expended per student rose through the mid-seventies then declined and rose again. Between 1971 and 1978 expenditures per student rose six percent.

State and local support has declined and federal support has increased. Private gifts, grants, and endowment income is unchanged at 4 percent of total income. Chart 2-8 shows that tuition has consistently supported about 30 percent of the educational and general budget over the decade. There has been an increase, however, in institutionally funded student aid. As a result the proportion of the budget supported by students and their parents has declined. Over the same period educational and general expenditures per student rose. The effects cancel out, and net tuition payments per student are unchanged. In constant 1980 dollars they are $700 at public institutions and $2900 at private colleges and universities. During this same time period, disposable personal income rose 7 percent more than consumer prices and federally supported student aid, which generally does not pass through institutional accounts, increased manyfold. Finally there has been a continuing shift of students from higher-priced private institutions into public colleges and universities. The implication of all these changes is that tuition is statistically less of a burden for students and their families in 1980 than in 1970.

The percent of educational and general expenditures in the "other" category -- an estimation of administrative expenditures -- has risen very slightly but not enough to draw a firm conclusion when we consider the associated measurement problems. Research and public service have grown very slightly with a shift toward public service. The proportion of educational and general expenditures devoted to student aid has also risen somewhat. Library expenditures are down. Maintenance is just about unchanged.

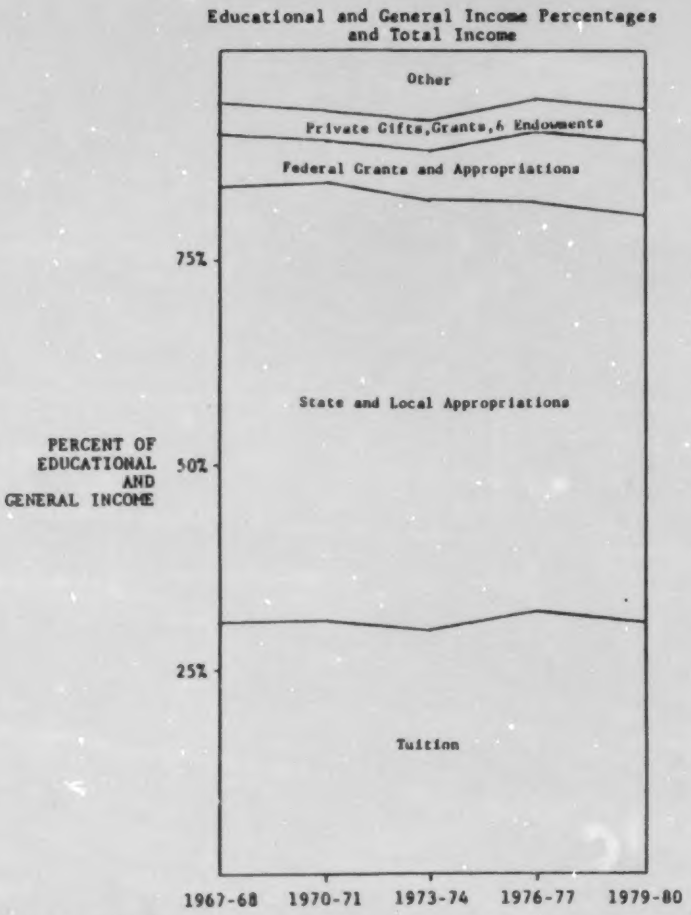
---

[15] Committee on College and University Accounting and Reporting, *Audits of Colleges and Universities* (New York: American Institute of Certified Public Accountants, 1973) p. 67.

Chart 2-8: Income and Expenditures: All Colleges and Universities

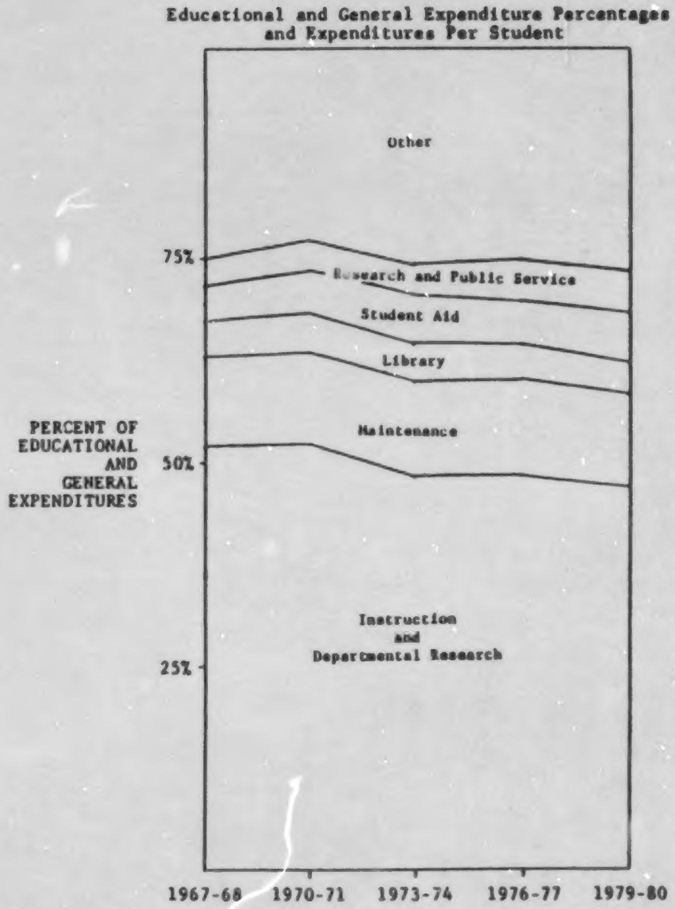
N=93

Educational and General Income Percentages and Total Income



TOTAL INCOME (1980 $1,000's)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Inc.	$25,190	$30,000	$32,570	$33,740	$36,360
Auxiliary Inc.	4,830	4,990	5,240	5,150	5,190
Current Fund Inc.	$30,020	$34,990	$37,810	$38,890	$41,550

Educational and General Expenditure Percentages and Expenditures Per Student



EXPENDITURES/STUDENT (1980 Dollars)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Exp./FTE	$3790	$3920	$4100	$3990	$4160
Auxiliary Exp./FTE	750	670	620	620	620
Curr. Fund Exp./FTE	$4540	$4590	$4720	$4610	$4780

However, this last item includes the cost of fuel as well as plant and equipment maintenance. Because fuel prices rose so rapidly during the period, the percent of the budget devoted to repair and upkeep has probably fallen. The decline in the percent of the budget devoted to instruction and to departmental research is the single clearest trend in this expenditure analysis--an observation not unique to this report. This dwindling percentage does not necessarily imply that students are receiving less instruction nor even that the student-faculty ratio is rising. Indeed, the factor most responsible for this reduction in the instruction and departmental research budget is the decline in faculty salary levels. The issues of maintenance expenditures and faculty salaries will be given special attention later in this chapter.

Public and Private Institutions

Charts 2-9 and 2-10 summarize the financial data for the public and private sectors. The major income change for state supported institutions is the increased support in federal grants and appropriations to the educational and general budget from 1971 to 1980. State and local appropriations, although still comprising 50 percent of the educational and general budget, are relatively less important than at the start of the decade. The expenditure patterns are very close to the trends reported for all institutions. This is not surprising because the data were weighted on 1976 enrollment shares, and public institutions enroll three-quarters of the students.

Independent colleges show a decline in support from private gifts and grants and from tuition. Support from governments has increased. Most of this came from federal sources but some (about one or two percent) came from state governments.

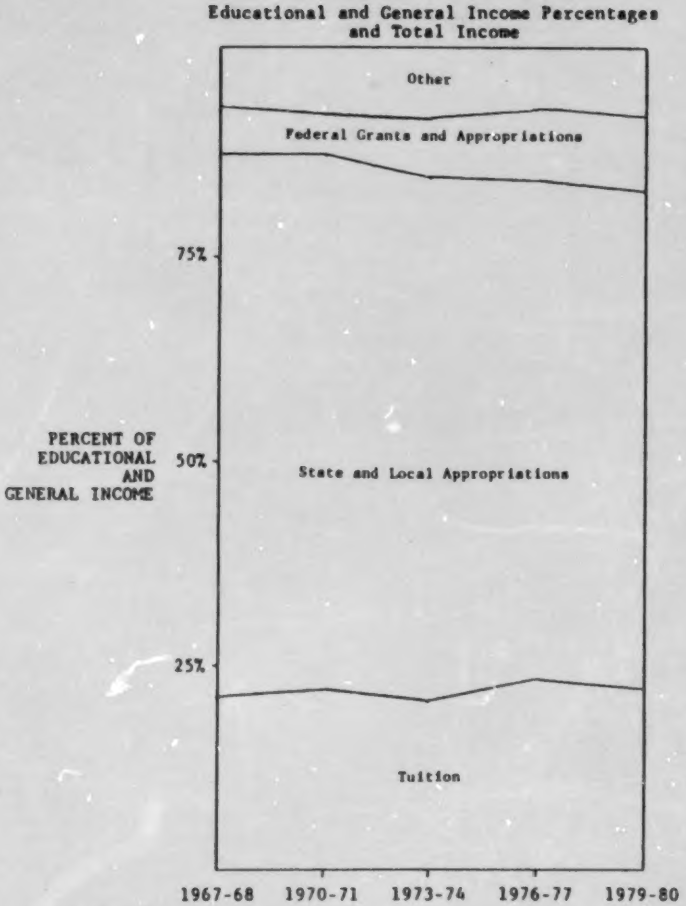
Expenditures per student rose sharply for private colleges (21%) between 1967-68 and 1973-74 and then stayed relatively constant, edging upward only slightly. The Carnegie Commission reported a similar large cost increase for this early period and urged colleges to "get these costs under control."[16] The advice was apparently heeded. Student aid accounted for some of the early increase in educational and general expenditures. Unlike other expenditure areas, the proportion of the budget devoted to assisting students rose steadily over the entire twelve-year period. It now stands at 12 percent. The percent of private college income coming from tuition has been relatively stable. This growing student aid expenditures, however, indicate that *net* tuition revenues are declining. The maintenance percentage has been constant but the proportion of the budget devoted to libraries has edged downward.

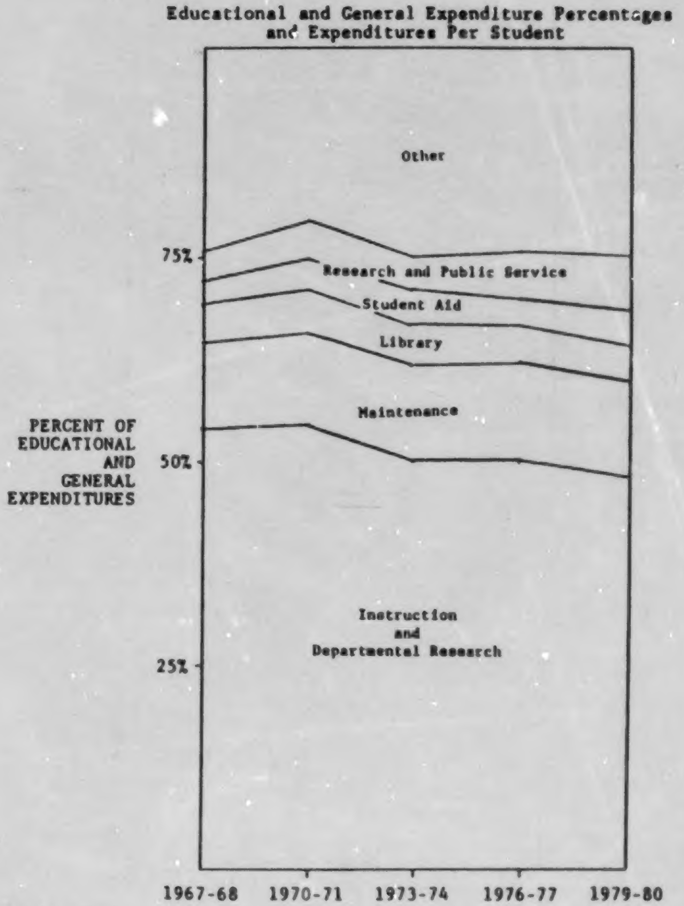
---

[16] Carnegie Commission on Higher Education, *The More Effective Use of Resources* (New York: McGraw-Hill, 1972) p. 35.

Chart 2-9: Income and Expenditures: Public Colleges and Universities

N=35



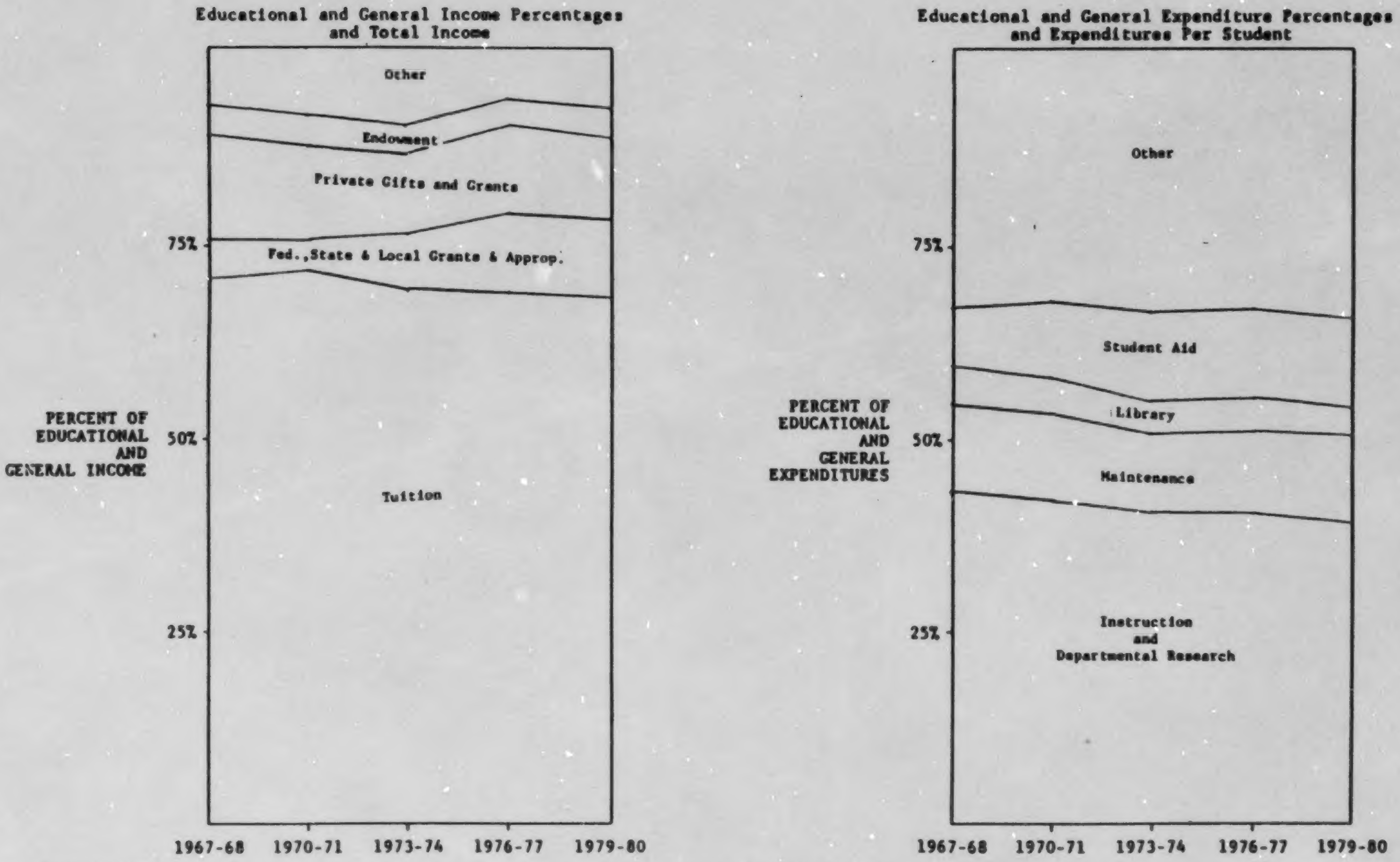


TOTAL INCOME (1980 $1,000's)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Inc.	$28,750	$34,090	$36,990	$38,130	$41,020
Auxiliary Inc.	5,440	5,570	5,950	5,790	5,790
Current Fund Inc.	$34,190	$39,660	$42,940	$43,920	$46,810

EXPENDITURES/STUDENT (1980 Dollars)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Exp./FTE	$3750	$3790	$3940	$3820	$3990
Auxiliary Exp./FTE	630	540	520	520	520
Curr. Fund Exp./FTE	$4380	$4330	$4460	$4340	$4510

Chart 2-10: Income and Expenditures: Private Colleges and Universities

N=58



TOTAL INCOME (1980 $1,000's)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Inc.	$10,000	$12,550	$13,700	$15,010	$16,450
Auxiliary Inc.	2,220	2,500	2,200	2,420	2,680
Current Fund Inc.	$12,220	$15,050	$15,900	$17,430	$19,130

EXPENDITURES/STUDENT (1980 Dollars)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Exp./FTE	$3960	$4500	$4800	$4720	$4870
Auxiliary Exp./FTE	1230	1220	1050	1040	1040
Curr. Fund Exp./FTE	$5190	$5720	$5850	$5760	$5910

Public Institutions by Carnegie Classification

The expenditures per student at public research and doctoral universities, as shown in Chart 2-11, are high but have declined steadily from 1967-68 to 1976-77. The reason for this decline is probably the rapid increase in enrollments at these institutions. Rising enrollments allow institutions to gain economies of scale--spreading fixed costs over more students. In addition, at these research and doctoral institutions "instruction and departmental research" includes a healthy proportion of departmental research. As enrollments go up, departmental research does not necessarily go up proportionately. Indeed, the extra students may be taught by less experienced part-time faculty or graduate students. Expenditure per student has increased in 1979-80 as enrollment growth has slowed.

The percentage of financial resources given to research and public service has increased noticeably over the decade although federal grants and local appropriations have not. State appropriations have increased, suggesting that states may be asking more of these universities in terms of organized research and service. Tuition has fallen as a proportion of educational and general income while private gifts, grants, and endowment have increased. All of the increase in the latter has come in the form of gifts and grants with no change in the proportion of income supported by endowments.

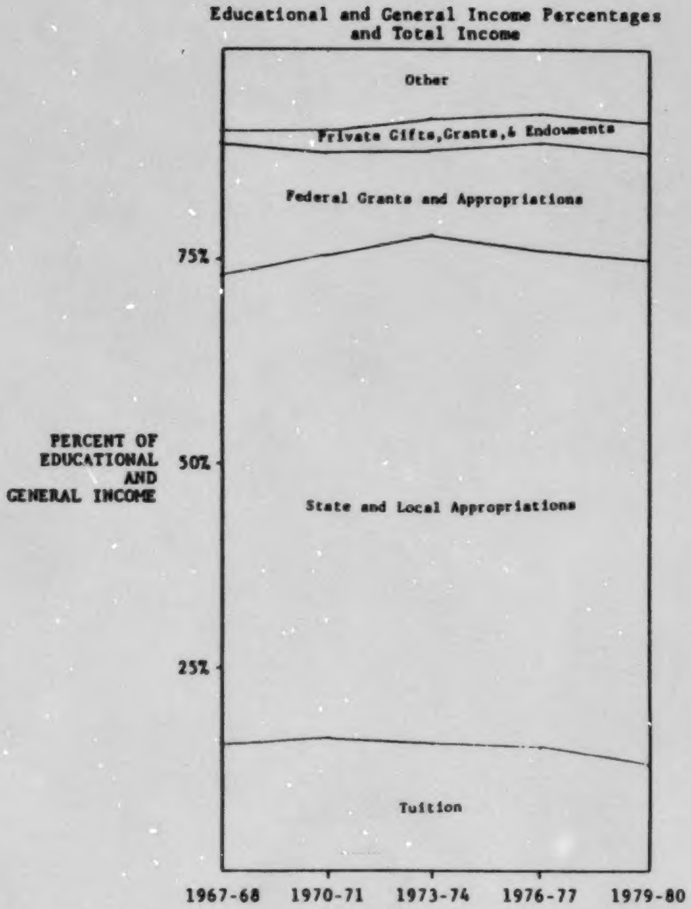
The trends at public comprehensive colleges, as shown in Chart 2-12, are considerably different from those at research and doctoral universities. The proportion of support from state (and local) government has declined from 65 to 59 percent. Support from tuition and fees has gone up slightly, and federal resources are much more significant to these institutions. Research and public service, as an expenditure category, has grown but not very much. This suggests that federal support for these institutions is becoming more central to their mission -- perhaps in the form of FIPSE, Title III, College Work Study, and other categorical aid not related to research support.

Enrollment has not increased nearly as rapidly at these colleges as at other public institutions. It is, therefore, not surprising to see more moderate growth in total income than growth in expenditures per student. The latter statistic increased 14 percent during the twelve-year period.

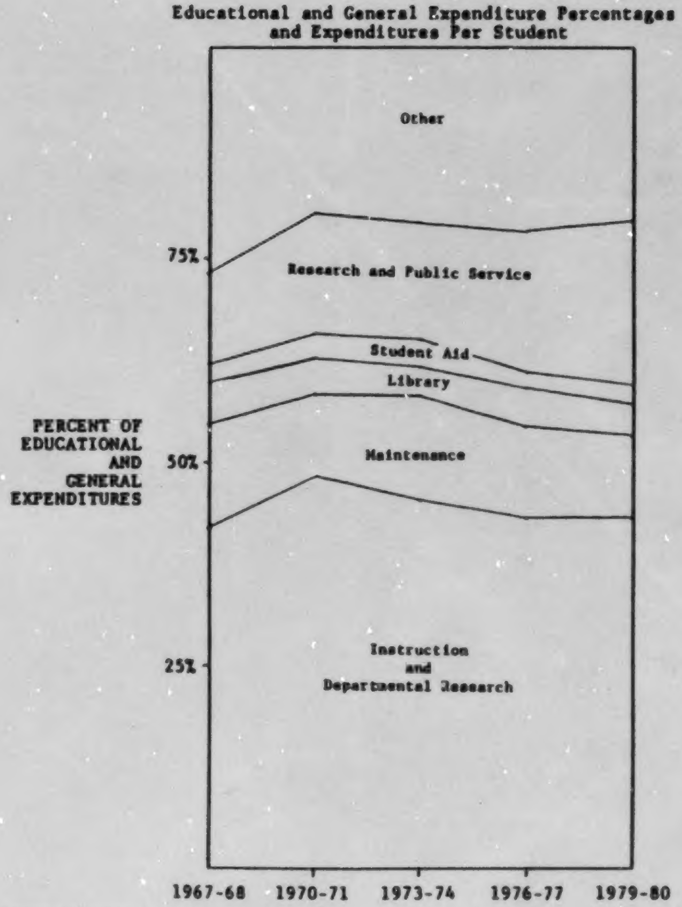
Federal grants and appropriations have also increased at public community colleges. Again, by examining the almost stable research and public service expenditure data on Chart 2-13, we can see that these funds support the basic operations of these two-year colleges and are not especially aligned with research and public service. The "basic operations," of course, include a concerted effort at continuing education for area adults. The im-

Chart 2-11: Income and Expenditures: Public Research and Doctoral Universities

N=6



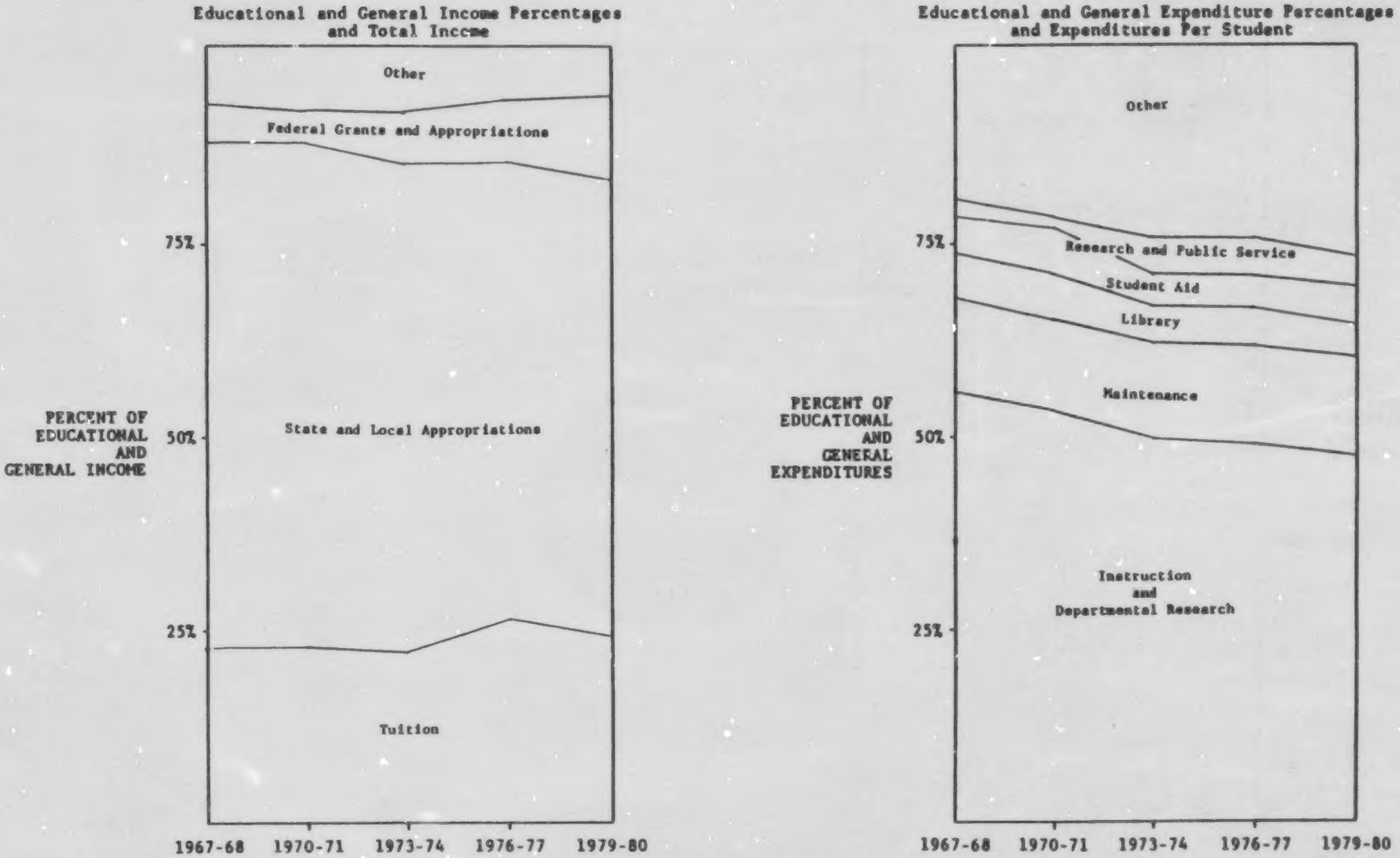
TOTAL INCOME (1980 $1,000's)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Inc.	$124,160	$141,540	$144,920	$148,190	$161,530
Auxiliary Inc.	21,120	21,520	23,740	22,060	22,110
Current Fund Inc.	$145,280	$163,060	$168,660	$170,250	$183,640



EXPENDITURES/STUDENT (1980 Dollars)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Exp./FTE	$7350	$6800	$6620	$6450	$6620
Auxiliary Exp./FTE	1130	960	980	950	970
Curr. Fund Exp./FTE	$8480	$7760	$7600	$7400	$7590

Chart 2-12: Income and Expenditures: Public Comprehensive Universities

N=19

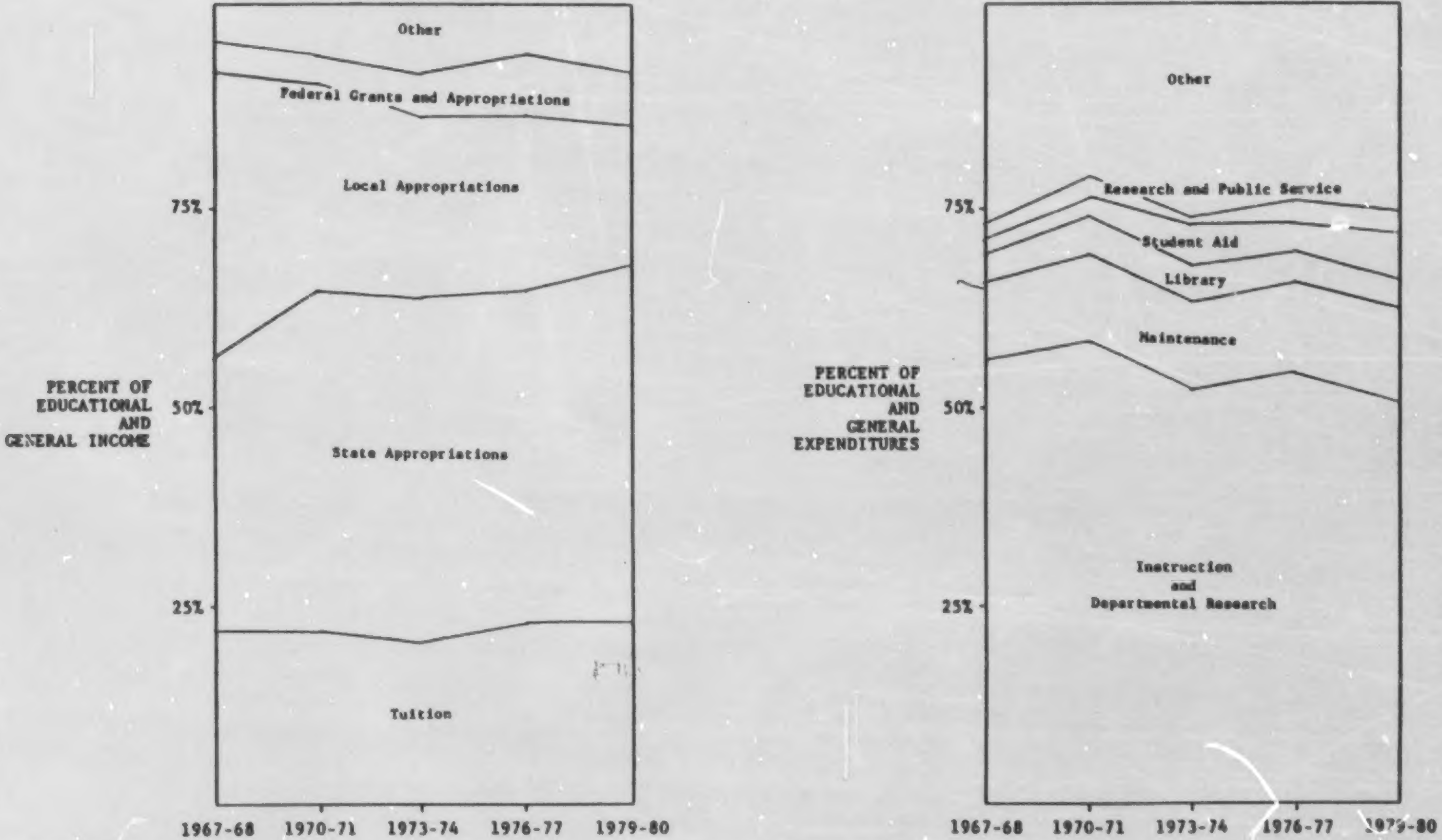


TOTAL INCOME (1980 $1,000's)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Inc.	$13,180	$17,320	$20,560	$21,170	$22,740
Auxiliary Inc.	4,520	4,610	4,520	4,760	4,700
Current Fund Inc.	$17,700	$21,930	$25,080	$25,930	$27,440

EXPENDITURES/STUDENT (1980 Dollars)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Exp./FTE	$3320	$3570	$4040	$3820	$4040
Auxiliary Exp./FTE	860	770	740	770	730
Curr. Fund Exp./FTE	$4180	$4340	$4780	$4590	$4770

Chart 2-13: Income and Expenditures: Public Two-Year Colleges

N=10



Educational and General Income Percentages and Total Income

Educational and General Expenditure Percentages and Expenditures Per Student

TOTAL INCOME (1980 $1,000's)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Inc.	$5,530	$7,330	$9,790	$10,560	$10,600
Auxiliary Inc.	320	390	450	530	560
Current Fund Inc.	$5,850	$7,720	$10,240	$11,090	$11,160

EXPENDITURES/STUDENT (1980 Dollars)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Exp./FTE	$2750	$2820	$2860	$2830	$2970
Auxiliary Exp./FTE	270	210	170	170	190
Curr. Fund Exp./FTE	$3020	$3030	$3030	$3000	$3160

portant income trend at public community colleges is the replacement of a large portion of local support with state funds. In 1967-68 state and local government supported these colleges equally. Now state authorities supply close to 50 percent of the funds and local government less than 20 percent. Tuition has provided a constant source of revenue -- about 22 percent. All of these trend data are supported by Breneman and Nelson's more comprehensive study on community college finances.[17]

Income per institution has risen rapidly at community colleges as have enrollments. Expenditures per student have been level since 1971 but rose in 1979-80 as enrollments dipped. The proportion of expenditures devoted to instruction has fallen. Student aid now consumes a larger piece of the budget. This change in student aid is, however, misleading. Several of the community colleges included federal student aid programs as income and expenditures in their HEGIS reports -- a procedure that is contrary to explicit HEGIS directions. Maintenance consumed a larger proportion of the 1980 community college budget than it did in 1968.

Private Institutions by Carnegie Classification

Research and public service expenditures of the independent research and doctoral universities have declined very significantly, and federal grants and appropriations have declined, as shown on Chart 2-14. The sample of two institutions is too small a group upon which to base confident assertions. The financial trends at these two universities, although somewhat more severe, are similar to those reported by Minter and Bowen for similar institutions.[18]

Private comprehensive colleges and universities are relying slightly less on tuition and less on private gifts and grants at the end of the decade. (See Chart 2-15.) Government funds from both the state and federal levels have replaced these funds. Expenditures per student have been remarkably stable over the last six years of the decade after rising in the prior six years. Maintenance, library expenditures, and especially instruction and departmental research receive proportionately less of the budget. Student aid and administration get a larger share.

In contrast to the other independent colleges, tuition at the more

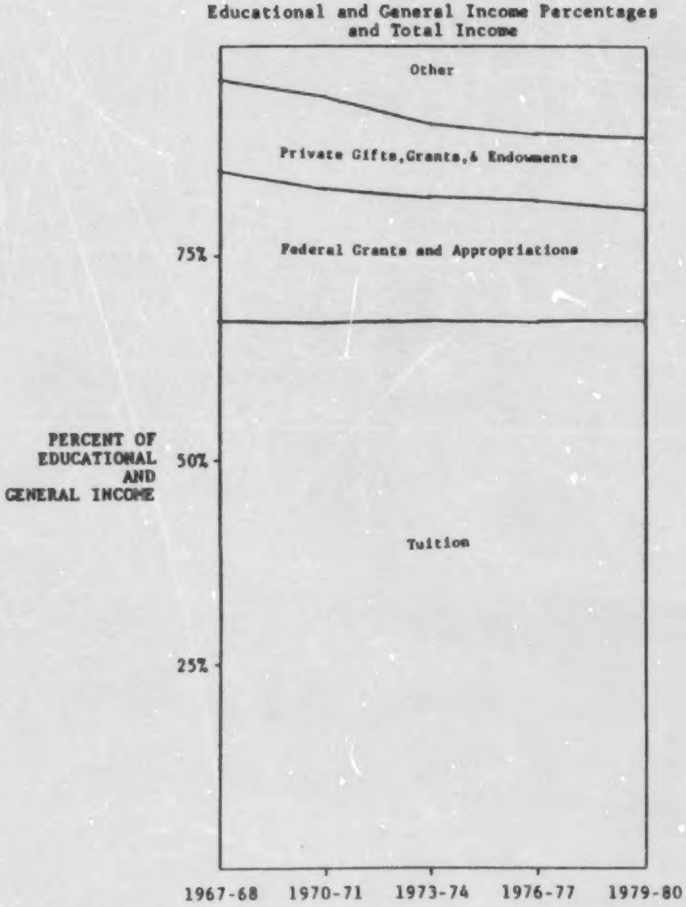
---

[17] David W. Breneman and Susan C. Nelson, *Financing Community Colleges: An Economic Perspective* (Washington, D.C.: Brookings Institution, 1981) p. 17.

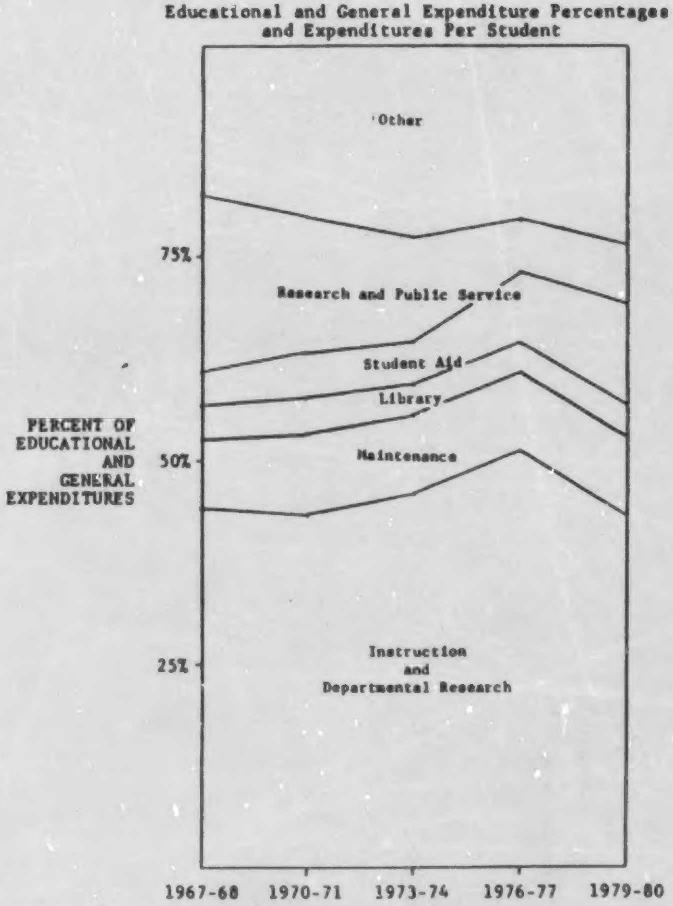
[18] Minter and Bowen, pp. 63-67.

Chart 2-14: Income and Expenditures: Private Research and Doctoral Universities

N=2


Educational and General Income Percentages and Total Income

TOTAL INCOME (1980 $1,000's)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Inc.	$46,490	$55,250	$62,660	$74,030	$81,430
Auxiliary Inc.	5,510	4,830	4,740	6,330	8,950
Current Fund Inc.	$52,000	$60,080	$67,400	$80,360	$90,380

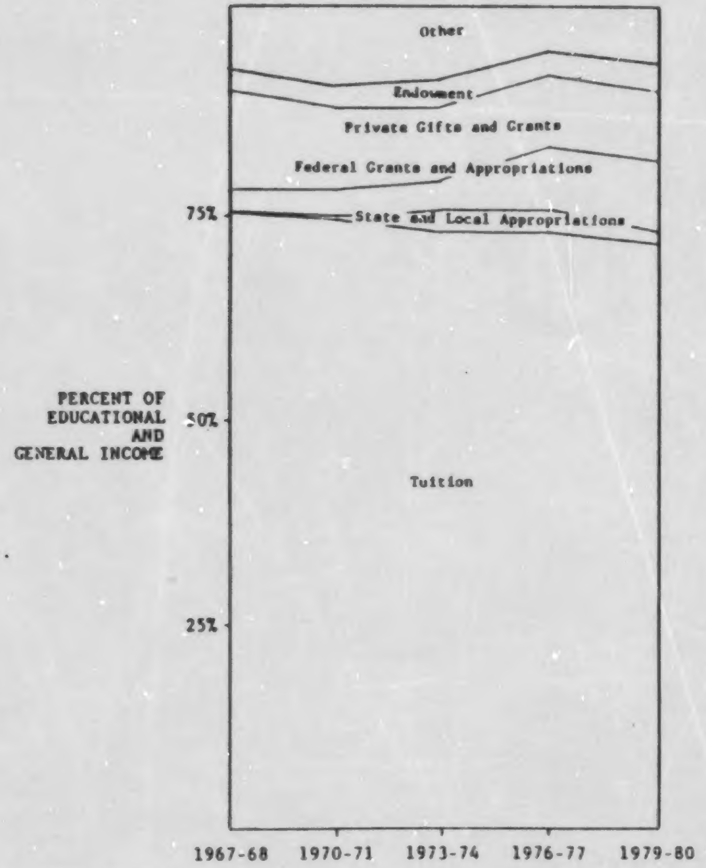

Educational and General Expenditure Percentages and Expenditures Per Student

EXPENDITURES/STUDENT (1980 Dollars)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Exp./FTE	$6150	$6580	$6520	$6680	$6970
Auxiliary Exp./FTE	900	630	560	580	850
Curr. Fund Exp./FTE	$7050	$7210	$7080	$7260	$7820

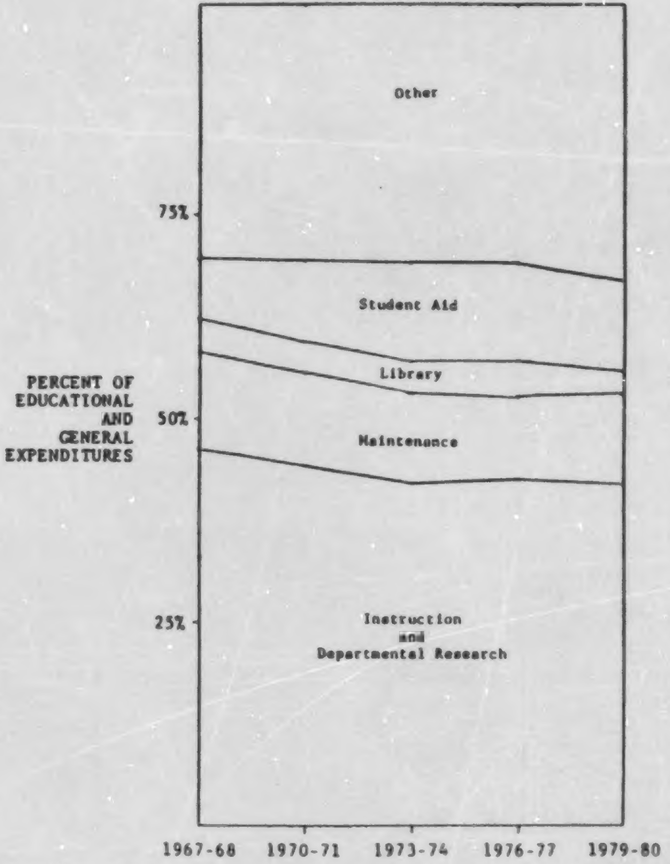
Chart 2-15: Income and Expenditures Private Comprehensive Universities

N=24

Educational and General Income Percentages and Total Income



Educational and General Expenditure Percentages and Expenditures Per Student

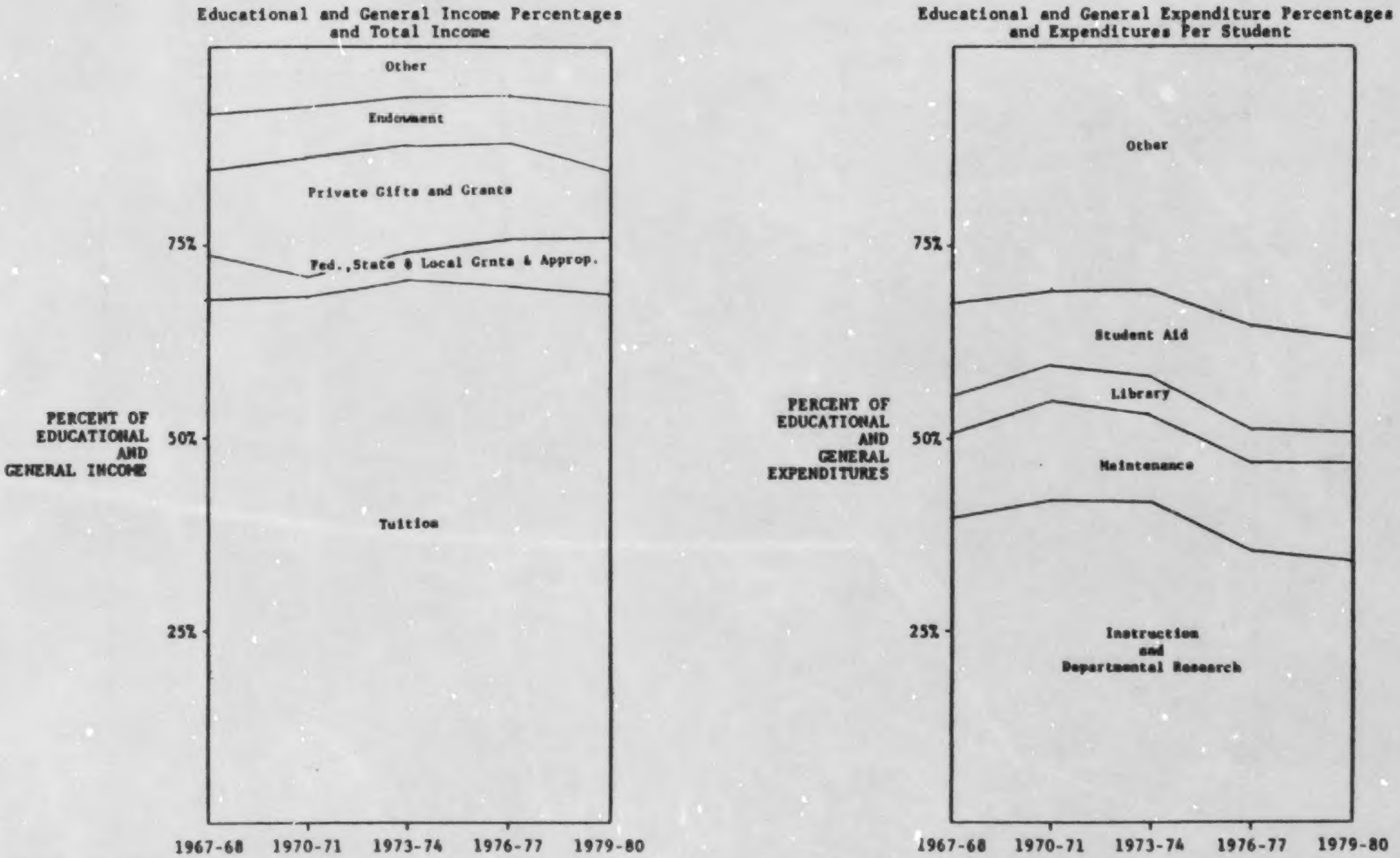


TOTAL INCOME (1980 $1,000's)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Inc.	$10,890	$14,430	$15,510	$16,330	$17,960
Auxiliary Inc.	2,570	3,240	2,780	3,040	3,170
Current Fund Inc.	$13,460	$17,670	$18,290	$19,370	$21,130

EXPENDITURES/STUDENT (1980 Dollars)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Exp./FTE	$3590	$4160	$4410	$4410	$4440
Auxiliary Exp./FTE	1120	1180	960	960	950
Curr. Fund Exp./FTE	$4710	$5340	$5370	$5370	$5390

Chart 2-16: Income and Expenditures: Private Liberal Arts Colleges I

N=11


Educational and General Income Percentages and Total Income

Educational and General Expenditure Percentages and Expenditures Per Student

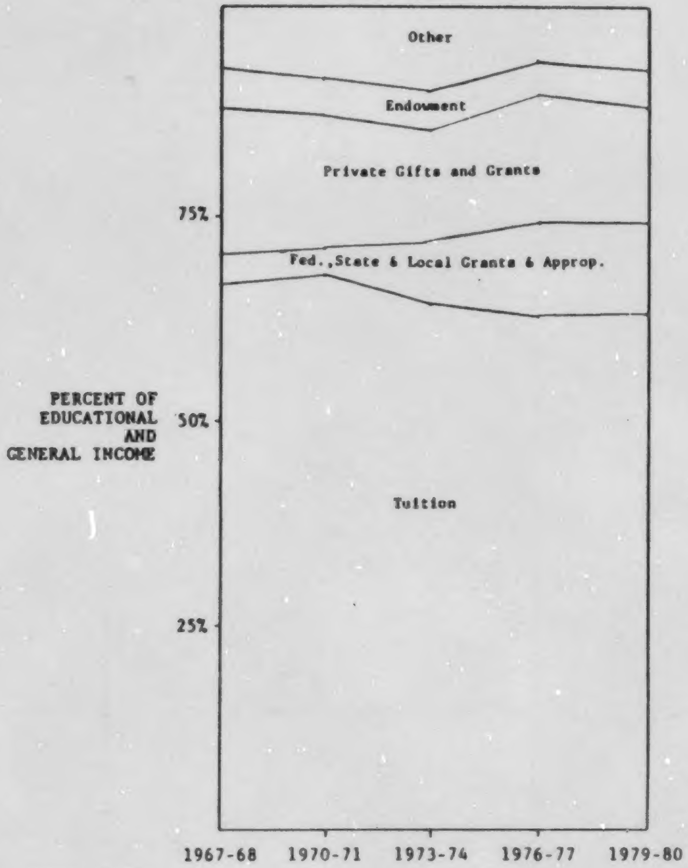
TOTAL INCOME (1980 $1,000's)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Inc.	$5,040	$5,510	$5,840	$6,190	$6,340
Auxiliary Inc.	2,080	2,150	2,050	1,990	1,820
Current Fund Inc.	$7,120	$7,660	$7,890	$8,180	$8,160

EXPENDITURES/STUDENT (1980 Dollars)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Exp./FTE	$5620	$5650	$5600	$5750	$5810
Auxiliary Exp./FTE	1900	1970	1780	1690	1580
Curr. Fund Exp./FTE	$7520	$7620	$7380	$7440	$7390

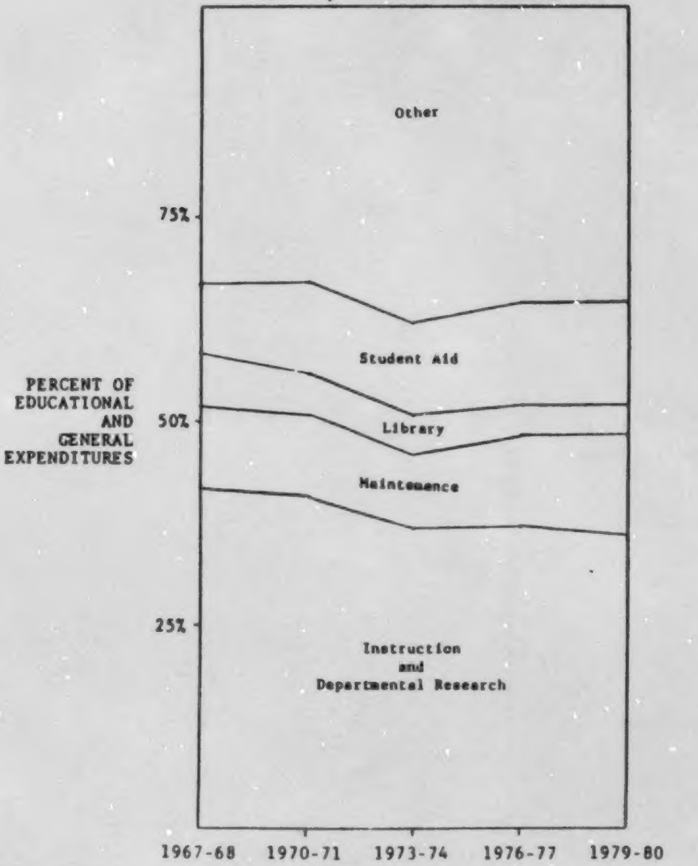
Chart 2-17: Income and Expenditures: Private Liberal Arts Colleges II

N=18

Educational and General Income Percentages and Total Income



Educational and General Expenditure Percentages and Expenditures Per Student

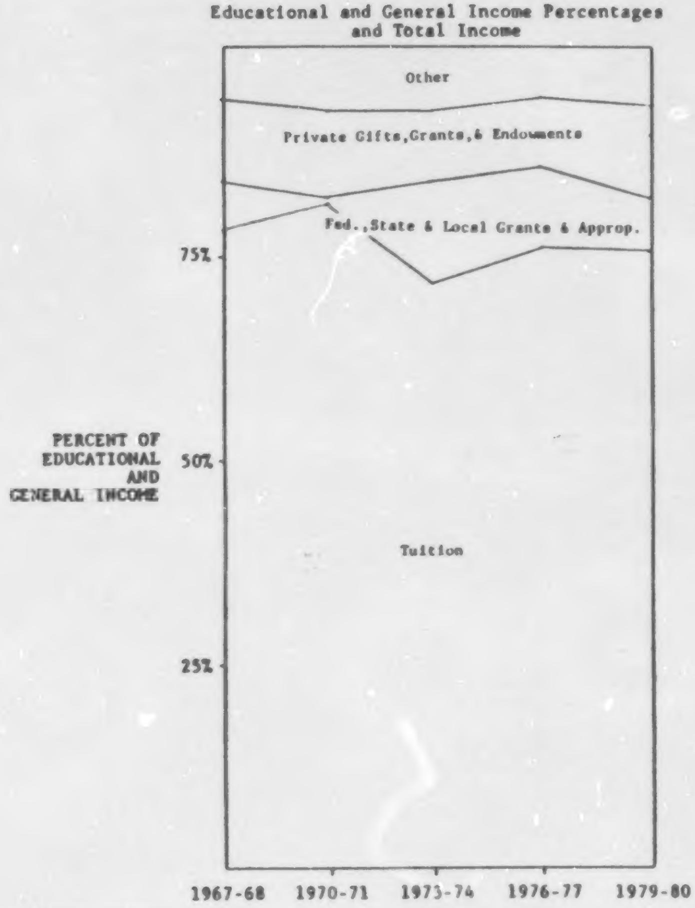


TOTAL INCOME (1980 $1,000's)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Inc.	$2,830	$3,350	$3,590	$3,820	$4,160
Auxiliary Inc.	1,100	1,070	930	870	970
Current Fund Inc.	$3,930	$4,420	$4,520	$4,690	$5,130

EXPENDITURES/STUDENT (1980 Dollars)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Exp./FTE	$3620	$4270	$4780	$4510	$4830
Auxiliary Exp./FTE	1240	1170	1080	1010	1050
Curr. Fund Exp./FTE	$4860	$5440	$5860	$5520	$5880

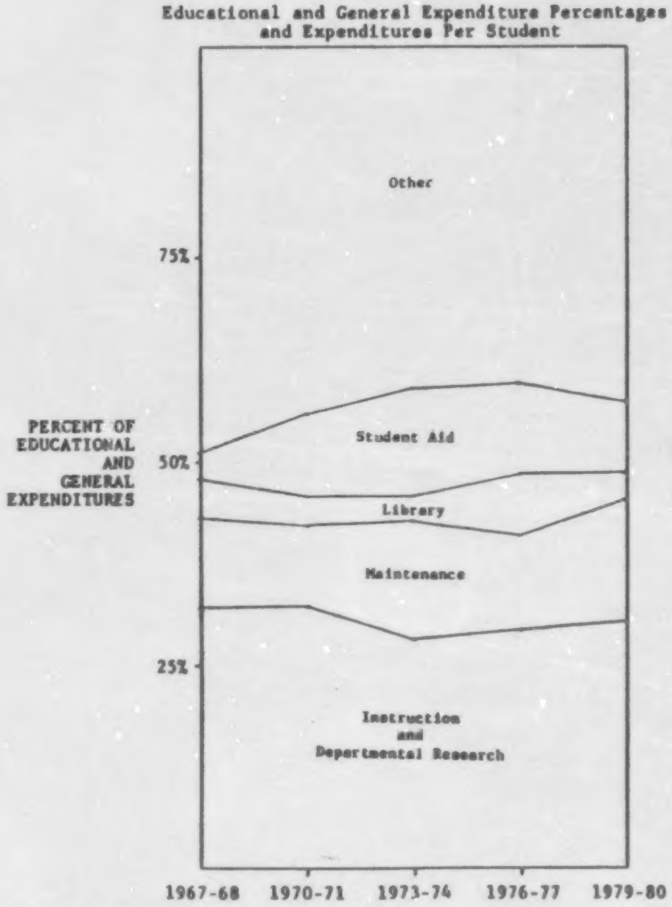
Chart 2-18: Income and Expenditures: Private Two-Year Colleges

N=3



Educational and General Income Percentages and Total Income

TOTAL INCOME (1980 $1,000's)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Inc.	$2,420	$2,480	$2,560	$3,070	$3,190
Auxiliary Inc.	1,500	1,590	920	1,150	1,070
Current Fund Inc.	$3,920	$4,070	$3,480	$4,220	$4,260



Educational and General Expenditure Percentages and Expenditures Per Student

EXPENDITURES/STUDENT (1980 Dollars)	1967-68	1970-71	1973-74	1976-77	1979-80
Ed. and Gen. Exp./FTE	$3620	$4430	$4910	$4660	$4390
Auxiliary Exp./FTE	1670	1320	1470	1470	1310
Curr. Fund Exp./FTE	$5290	$5750	$6380	$6130	$5700

prestigious Liberal Art I institutions accounts for the same percent of income in 1980 as in 1968. Public grants, primarily from Washington, have replaced private gift and grant income. Endowment income has been relatively stable until the last three years. The recent increase may reflect rising interest rates. However, the endowment spending policies (i.e., the determination of endowment income) at many private institutions have been liberalized and threaten to erode endowment principal. Although total income has risen slowly over the decade, enrollments have increased at a somewhat faster pace and average income per student has declined. Of these expenditures, administration and student aid are getting a larger share in 1980 than in 1971. The library is getting slightly less but the instruction and departmental research category represents a considerably smaller proportion of the total budget. Almost 42 percent of educational and general resources went to this category in 1971. In 1980, the proportion is just about 34 percent. All these data are detailed in Chart 2-16.

Liberal Arts II colleges are somewhat akin to the comprehensive universities in reputation and caliber of student. These liberal arts institutions are financially similar, as shown on Chart 2-17. Government funds have replaced tuition and other private sources. Expenditures per student have been generally steady since 1974, having risen in the preceeding six years. Libraries, and instruction and departmental research receive smaller pieces of the financial pie. Student aid, administration, and, in this case, maintenance receive a larger share. The increase in institutionally funded student aid has the effect of reducing the actual, or net, support that comes from students and their parents.

The sample for private two-year colleges is small but the high proportion of income from tuition, shown on chart 2-18, is reasonable for these less prestigious colleges. Student aid has become a much larger expenditure category and represents a significant drain on institutional resources. The instruction and departmental research budget is low but has not declined very much. The actual expenditures per student have gone up and down, closing the decade at the same level as at the beginning.

Salary Analysis

The decline in the percent of educational and general expenditures accounted for by "instruction and departmental research" is a common feature in the financial framework of all groups of institutions. Other authors have reported this trend, and the explanation is well understood. Faculty salaries, comprising about 80 percent of this expenditure category, have not kept pace with inflation. Inflation pushes higher and higher the costs that colleges and universities must pay for their goods and, as budgets are squeezed, administrators look for relief anywhere possible. That relief has come in the form of an over-supply of college faculty. The over-supply has two sides. The graduate programs, which grew so rapidly in the 1960's, were pouring out many new Ph.D.'s in the 1970's, most of whom were eager to assume teaching positions in higher education. At the same time the demand for college education has moderated, thereby reducing the need for faculty. The market economy in the United States does not work perfectly. On the other hand, it is not so flawed as to shield college faculty from this major disequilibrium. This section compares the trends in faculty salaries with other professionals and with other workers. We have reviewed data prior to the 1970's in order to achieve a more protracted perspective.

The dotted line on Chart 2-19 plots the average salary for the faculty members at the ninety-three colleges of this study in 1980 constant dollars. The average reached a high point in 1971 at slightly over $26,000. It then declined rapidly to $21,000 in 1980. The solid line just above it comes from reports published by the AAUP.[19] Although the peak for this larger group is slightly higher, the trend is very similar. The solid line at the bottom of the chart represents average non-farm annual wages.[20] The decline of faculty salaries during the 1970's stands in sharp contrast to the very modest decline of salaries of other non-farm employees. However, data from the AAUP and for non-farm workers is available from earlier years. The rapid decline of faculty salaries in the 1970's matches an equally rapid rise that occurred in the 1960's, a period in which non-farm wages increased only slightly. From this perspective, we may view the 1970's as a correction to what occurred in the 1960's, a time when higher education was expanding, and the demand for college faculty was exceeding the supply.

Data on faculty salaries and for other professional groups are available prior to 1960, but they exist in a somewhat different form. Between 1940 and 1956 average figures are available.[21] After 1959 only median salary in-

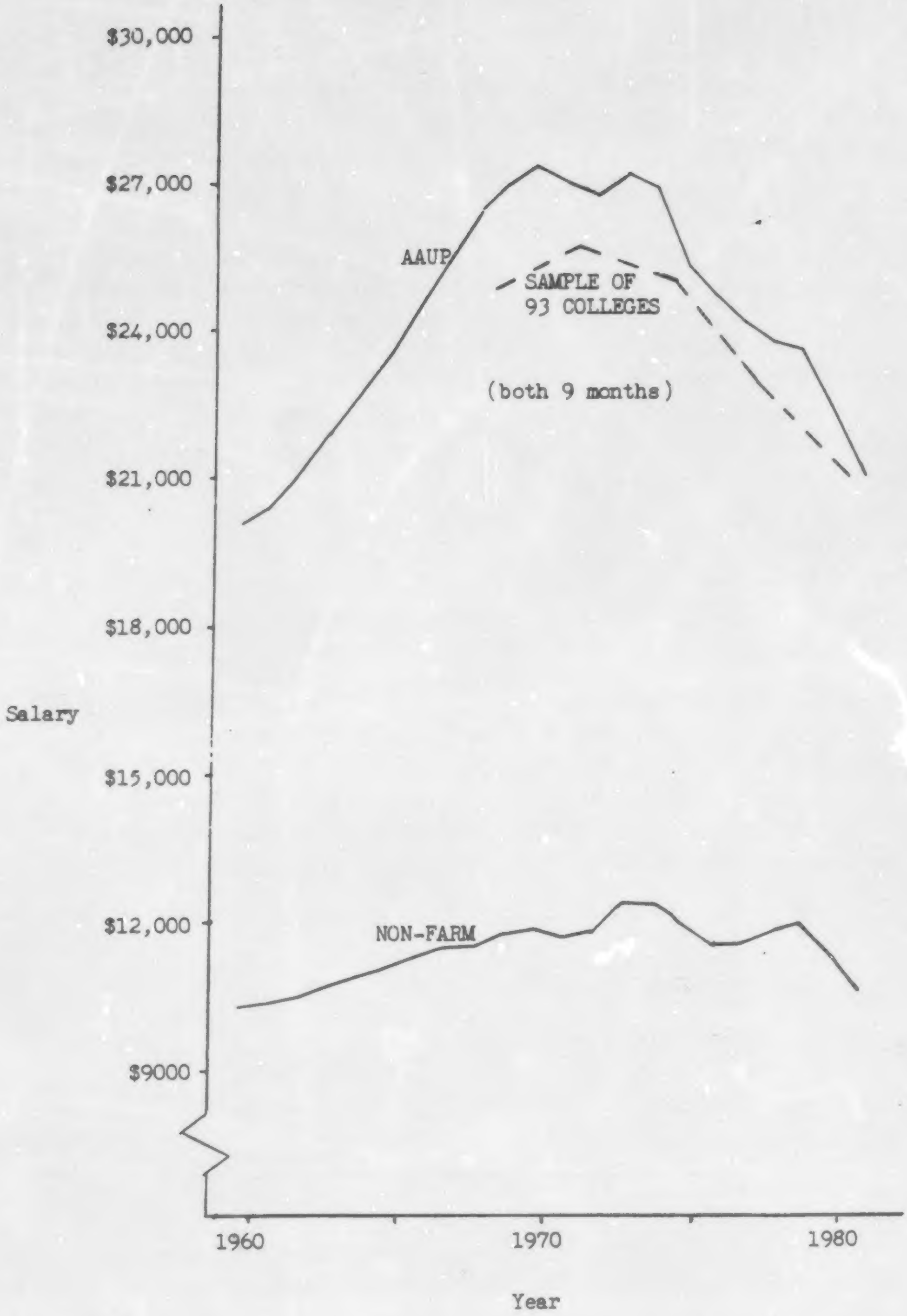
---

[19] *AAUP Bulletin* American Association of University Professors. Summer issues 1960 to 1978, and *Academe*, American Association of University Professors. September issues 1979 to 1981.

[20] *Statistical Supplement to the Survey of Current Business,* 1979 edition, p. 76, and *Statistical Abstract of the U. S.* 1981, 102nd edition, p. 404, (U.S. Dept. of Commerce, Bureau of the Census).

[21] *Historical Statistics of the U.S. -- Colonial Times to 1970* (Washington, D.C.: U.S. Dept. of Commerce, Bureau of the Census Part 1) pp. 175-176.

Chart 2-19: Average Faculty Salaries and Non-Farm Wages
(In 1980 Dollars)



formation is available for the other professional groups.[22] Comparable trend data are shown for faculty and other professional groups -- physicians, dentists, and attorneys -- on Chart 2-20. In 1940 dentists and college faculty had similar salaries. Attorneys and physicians earned salaries that were about 50 percent higher than college teachers. During World War II this gap increased significantly, especially for dentists and physicians, as the demand for medical services increased and the number of college students declined. The end of World War II brought a temporary downward correction in the trend of physicians, dentists, and attorneys. The influx of college students funded under the G.I. bill was undoubtedly part of the reason for the continued growth in professorial salaries. Between the late forties and the early seventies the average salaries of all these professionals rose. The increases in faculty pay did not match nearly those of the other three groups. The 1970's show the salaries of professors and attorneys declining while medical practitioners show some gains. In 1980, the median salary of physicians stands almost 300 percent above that of a college teacher. The salaries of dentists are approximately 175% over those of college faculty. The attorney's median salary is twice as large. Of course, the faculty salary data are based on only nine months of income and do not include outside earnings. The actual gaps would be narrowed if total twelve-month remuneration of college faculty were reported.

Faculty salaries have declined in purchasing power during the 1970's. The significance of the decline depends upon the reference group used as comparison as well as on the time span considered. Comparing faculty salaries to wages of other workers suggests that the 1970's were a period of correction as college teaching salaries fell back into closer alignment with other non-farm wages. When juxtaposed against the salaries of physicians, dentists, and attorneys, however, faculty salaries appear to have steadily lost ground.

Maintenance and Operations

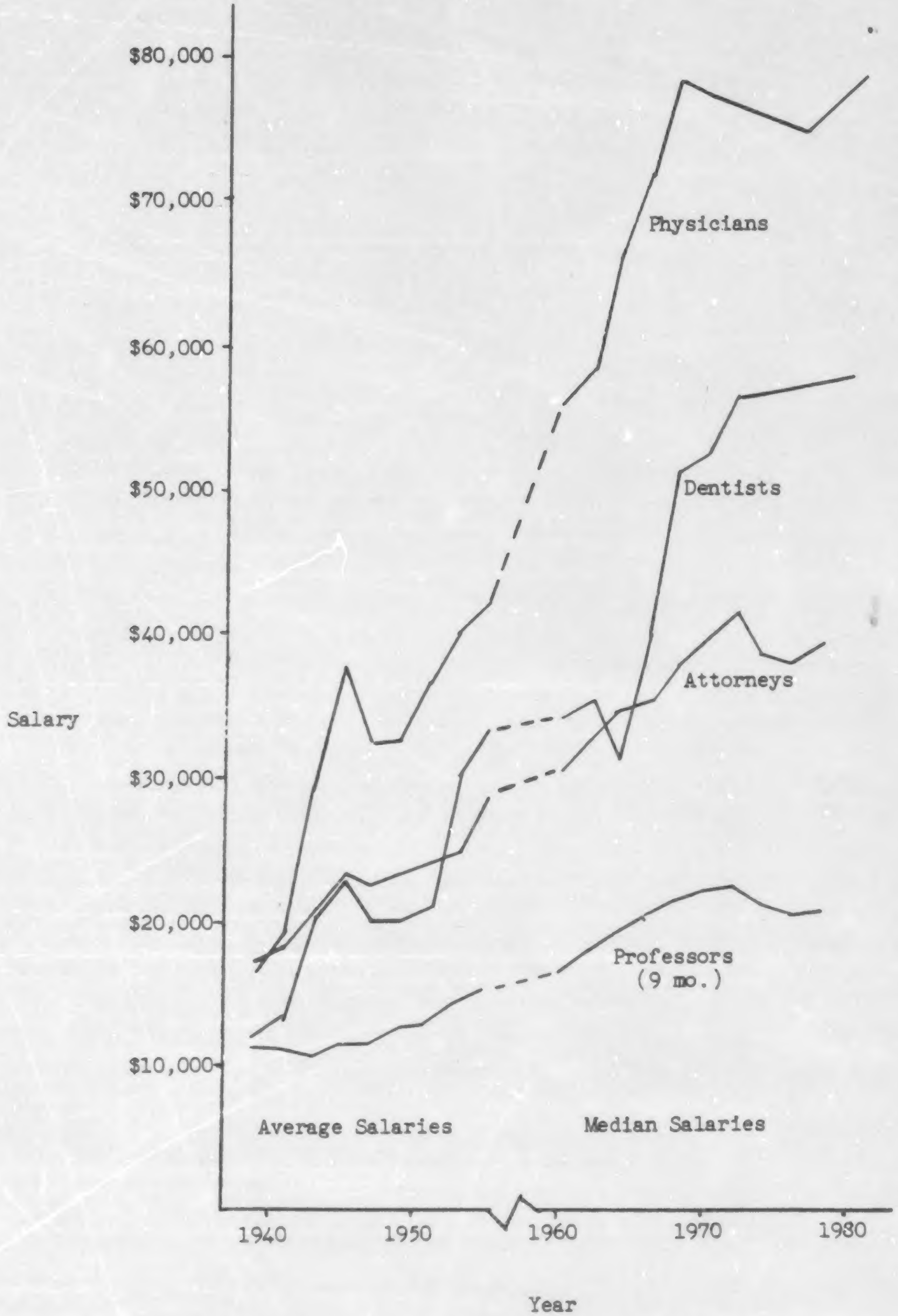
Maintenance and operations is another area in which colleges and universities can reduce current expenditures by deferring costs into the future. Howard Bowen postulates that "pressures on current budgets are always so intense that deferred maintenance is present in almost all institutions."[23]

---

[22] *Statistical Abstract of the U.S.* 1971-1974, 1976-1981, and *Handbook of Labor Statistics*(Washington, D.C.: U.S. Department of Labor, Bureau of Labor Statistics, December, 1980, Bulletin 2070) p. 294.

[23] Howard R. Bowen, *The Costs of Higher Education* (San Francisco: Jossey-Bass, 1980) p. 210.

Chart 2-20: Average and Median Salaries of Selected Professional Groups (In 1980 Dollars)



Competition for current operating funds between maintenance and such items as faculty salaries, student financial aid, and the purchase of goods and services is principally responsible for these deferrals. In a 1979 study, Kaiser assessed the extent of this problem and indicted that "as much as $35 billion may be needed nationwide to offset the cost of maintenance that colleges have put off since the campus building boom of the 1960's... perhaps $15 billion of the total would be required just to cover the backlog of projects to bring facilities up to government standards and to take care of essential energy-related repairs."[24]

Chart 2-21 illustrates the extent of the problem of deferred maintenance at the institutions in our study. Maintenance dollars per thousand dollars of plant investment declined 43 percent at all institutions -- from $103 to $59. Public and private institutions declined 48 percent and 16 percent respectively. To make this calculation, we expressed the numerator, maintenance costs, in constant dollars, while we expressed the denominator, plant investment, in current dollars. At first glance the division of constant dollar expenditures by a denominator in current dollars may seem distortive. However, since the plant investment at colleges and universities is neither depreciated nor adjusted for replacement costs, investment in plant in current dollars functions as a proxy for square footage -- albeit an imperfect one. Thus, dividing the current dollar value of plant into the constant dollar expenditures for maintenance and operations offers a rough assessment of the trends in maintenance costs over time.

These changes in maintenance from 1968 to 1980 may have resulted from several factors. From a positive viewpoint, lower maintenance expenditures could come from economies of scale. Services and the staff that all institutions require, do not necessarily increase proportionately with the size of the plant. A small institution, for example, may have one electrician. As the college builds, the electrical maintenance staff may remain constant in size. A second positive reason for reduced maintenance costs may be that facilities built in the 1960's and early 1970's require less maintenance.

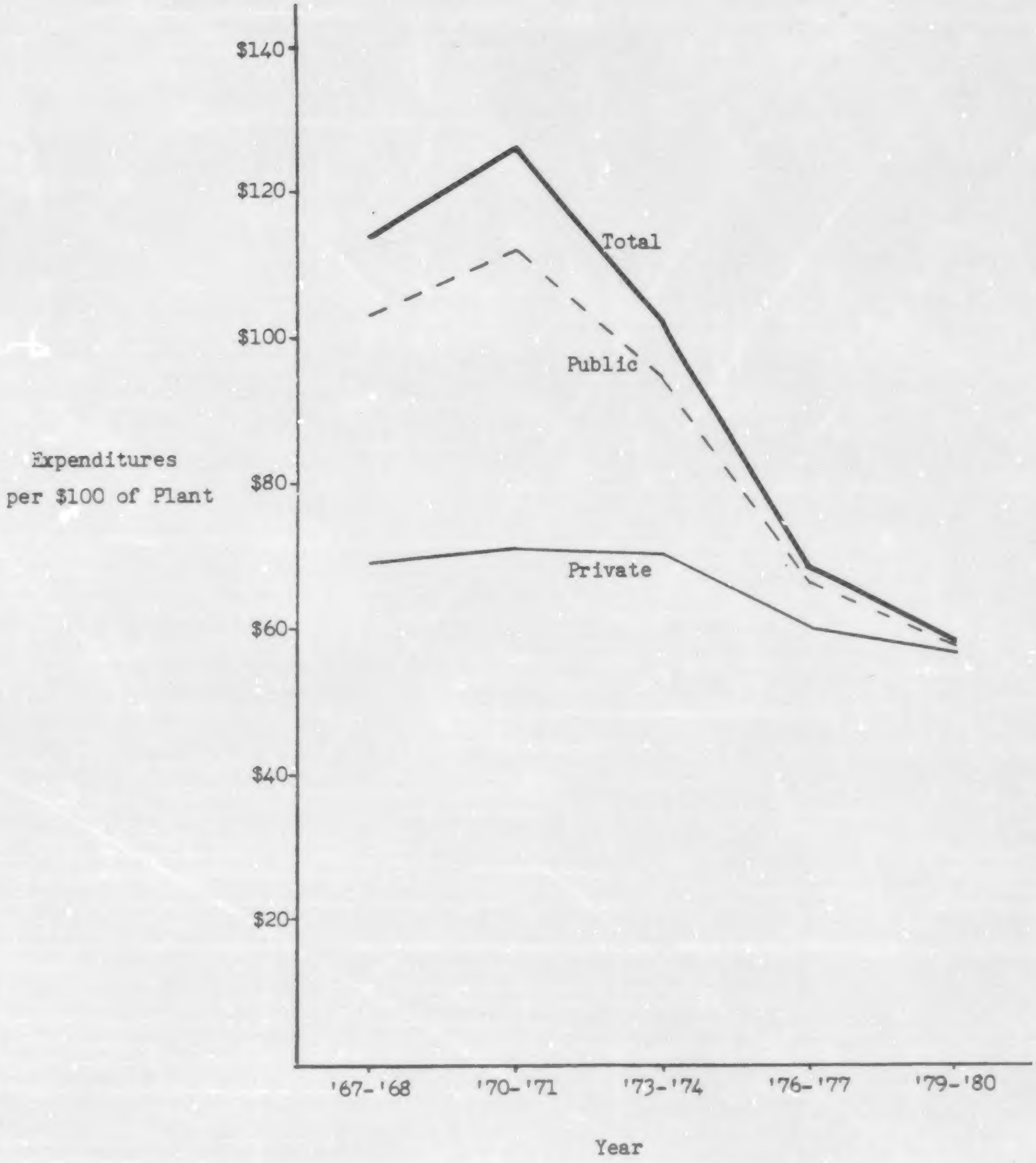
Even if Chart 2-21 does reflect real deferred maintenance, it does not necessarily reflect a debilitating practice. Some postponed maintenance may be simply cosmetic. Lawns may be mowed less often or windows washed less frequently.

The optimistic rationalizations notwithstanding, there are reasons to suggest that the trend lines on the chart understate the problem. The most

---

[24] H.H. Kaiser, *Mortgaging the Future: The Cost of Deferred Maintenance* (Washington, D. C.: Association of Physical Plant Administrators, 1979).

Chart 2-21: Maintenance and Operating Expenditures Per $1000 of Plant



significant of these is that the plant "operations and maintenance" expenditure category of the budget includes several major costs not related to maintenance. One is plant security. The other is fuel. The necessary expenditures for both have almost certainly gone up faster than inflation. As a result, there are fewer dollars in the "operations and maintenance" budget for maintenance. In addition, if colleges are experiencing an increase in vandalism, as many of the nation's institutions are, even more dollars of the maintenance budget are being diverted from traditional maintenance.

BALANCE SHEET ANALYSIS

In 1980 the accounting firm of Peat, Marwick, and Mitchell, in cooperation with John Minter Associates, published a guide for assessing financial condition.[25] The guide has two components of analysis: 1)contribution and allocation ratios and 2) balance sheet ratios. The contribution and allocation analysis is relatively common and shows the percent of educational and general income and expenditures contributed by various revenue sources and the percent of educational and general expenditures applied to various categories. These data are graphically displayed on Charts 2-8 to 2-18. This section applies Peat, Marwick, and Mitchell balance sheet ratio analysis to forty-seven of the fifty-eight private colleges that supplied financial reports in the sample.

Public colleges were omitted from the balance sheet analysis because it was unclear how meaningful the results would be. Public colleges are not financially independent, and the financial well-being of a public college is much more closely related to the financial health of the state or municipal government with which it is associated and, to some extent, to the political and popular support that the college itself enjoys.

The data for colleges came from 1970-71, 1973-74, 1976-77 and 1979-80 balance sheets. The 1967-68 year was excluded because some colleges would not supply the reports and because accounting procedures were considerably less uniform in 1968.

Table 2-1 lists the balance sheet ratios that were reviewed. The concept of expendable funds has been pioneered by Hans Jenny and is used very profitably in the Peat, Marwick, and Mitchell schema. Expendable funds are those funds that can be used regardless of the fund group in which they are located. The concept recognizes the sometimes artificial construct of

---

[25] *Ratio Analysis in Higher Education* (New York: Peat, Marwick, Mitchell and Co., 1980).

Table 2-1: Peat, Marwick, Mitchell & Co. Balance Sheet Ratios

Name/Description	Definition
Ratio of Financial Viability	
This ratio expresses the relationship of the total of the fund balance of all expendable funds to the balance of debt outstanding related to the financing of plant assets, as of the end of the fiscal year.	Numerator: Expendable fund balances Current funds, quasi-endowment funds, unexpended plant funds, funds for renewal and replacement, funds for retirement of plant indebtedness, including in each case restricted and unrestricted funds. Denominator: Plant debt whose related assets are investment in plant.
Ratio of Plant Equity to Plant Debt	
This ratio expresses the relationship of the excess of the cost of plant assets over related debt (equity) to the balance of the related debt.	Numerator: Net investment in plant. Denominator: Plant debt whose related assets are invested in plant.
Ratio of Expendable Fund Balances to Total Expenditures	
In this ratio the same definition of expendable fund balances is used as in the viability ratio. This ratio relates expendable fund balances to the total of current funds expenditures nd mandatory transfers.	Numerator: All expendable fund balances. Current funds, quasi-endowment funds, unexpended plant funds, funds for renewal and replacement, funds for retirement of plant indebtedness, including in each case restricted and unrestricted funds. Denominator: Total current funds expenditures and mandatory transfers.
Ratio of Capital Fund Balances to Total Expenditures	
This ratio relates the total of the balances of nonexpendable or capital funds to the total current fund expenditures and mandatory transfers.	Numerator: Nonexpendable or capital funds. Restricted and unrestricted loan funds, endowment and term endowment funds and annuity and life income funds. Denominator: Total current funds expenditures and mandatory transfers.

fund accounting. Money available to reduce debt or meet expenditures may be found in several places. Expendable fund balances include those of the current fund, quasi-endowment, unexpended plant funds, and funds for the retirement of indebtedness. All of these funds are not necessarily available to meet all emergencies. On the other hand, some funds excluded may be more flexible than their classification would indicate. This summary estimate of expendable funds is a good proxy for "liquid" reserves.

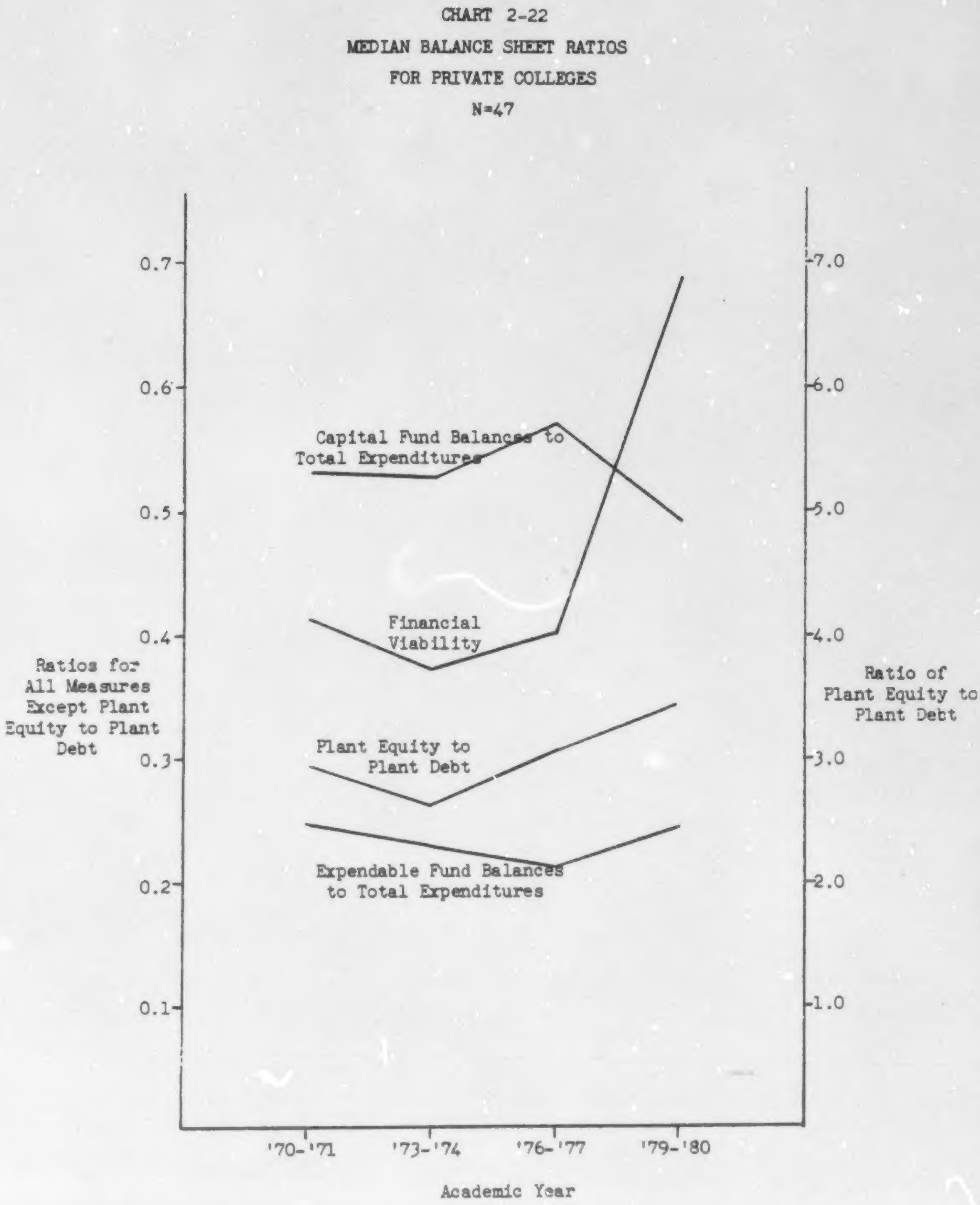
The first ratio in the analysis is termed financial viability and is the dividend of expendable fund balances over plant debt. It is a measure of the ability of an institution to marshall resources for the elimination of plant debt. Such an action is not necessarily desirable. A low ratio, however, suggests that the college is heavily in debt. If income should fall, the plant debt may become quite burdensome. Chart 2-22 shows a slight decline from 1971 to 1974, followed by a modest and then a very large increase in the medium value of this indicator. The conclusion is that these private colleges have significantly reduced their vulnerability to debt.

The next ratio reviewed is plant equity to plant debt. The values for this measure are on the right-hand axis with a scale ten times as large as the left-hand axis. In 1971 these colleges had three times as much plant equity as debt. After declining briefly in 1974, the ratio rose to 3.5 in 1980. Private colleges have apparently responded to well-known demographic facts and have stopped building and reduced plant debt.

The third measure is the ratio of expendable fund balances to current fund expenditures and mandatory transfers, a measure of the reserves available to meet current expenditures. This figure has been relatively stable over the decade -- declining modestly through 1977 and then rising again in 1980 to the 1971 level. In 1980, the median college in the sample could meet about one-quarter of its operating expenditures with these funds.

The final balance sheet ratio is the sum of all capital fund balances divided by total current fund expenditures and mandatory transfers. Capital funds include endowment, loan funds, and life income and annuity funds. Although these funds cannot be expended for current purposes, it is important, nevertheless, that the magnitude of these funds keep pace with institutional growth. If, for example, the loan fund balance is stable as enrollment (and current fund revenues) increase, there will be relatively less institutionally based loan money available to help students pay tuition. The dividend of capital funds over expenditures was stable during the first three years. It then increased during the next three, and declined in the last period. There was a small net drop over the nine-year period. A review of the composition of the capital fund shows the trouble spot to be in endowment funds: the endowment fund balances have not kept pace with current fund growth.

Chart 2-22: Median Balance Sheet Ratios for Private Colleges
N=47



The charts of ratios for the private colleges by Carnegie Classification are not presented here. Most groups showed trends similar to the entire set of private institutions. There were some exceptions in the Liberal Arts II college group. Capital funds to total expenditures increased steadily during the decade with the loan fund balance being the most significant factor. The other ratios declined in the first half of the decade and then held steady. Of most concern is the financial viability ratio. It fell from 0.50 in 1971 to 0.32 in 1974, then held close to that level for the rest of the decade. The level and trend of this statistic suggests that these colleges have been unable to build a financial cushion for protection against previously acquired plant debt.

WHAT HAPPENED IN THE SEVENTIES

Enrollments grew rapidly in the late sixties and early seventies and have since stabilized. Simultaneously, the competition for students has grown steadily. Most colleges have increased the percent of applicants accepted. At the same time, the "yield" from the accepted applicants pool has declined. SAT scores fell for all groups of institutions at about the same rate as scores fell for all test takers.

The trends for all institutions are based on weighting the statistics from the separate groupings of colleges and universities, using 1976 enrollment shares as the base. Because of their enrollment shares, public colleges dominate the overall trends. Enrollments have risen slowly and steadily at private colleges. At the same time the percent of students admitted is higher at the end of the decade than at the beginning -- but not as high as in the middle of the decade. The yields for most private colleges have tended downward since 1971. Two observations are in order, however. The private liberal arts and two-year colleges show virtually no enrollment growth over the twelve-year period -- a period in which most other colleges grew substantially. Their small size makes them especially vulnerable to possible perturbations of the coming decade. Secondly, private colleges, to a greater extent than public ones, depend upon their image as selective institutions to attract students. Increasing the percent of applicants accepted and declining SAT scores, therefore, may do more competitive damage in this sector.

Income and income per student were still rising rapidly at the end of the sixties. This growth in resources per student tapered off in the mid-seventies and has remained relatively constant since 1974. Sources of funding, however, have shifted as the federal government has replaced state funds at public four-year colleges and replaced private gifts and grants at independent institutions. Federal support of two-year colleges has also grown but simultaneously state money has been substituted for local tax-levy support. The general trend is one of moving the resource support base to higher levels of government--a trend that is understated by this examination of institutional funding. Colleges and universities are much more dependent on federal student support programs in the 1980's. Pell (BEOG) grants, for example, were enacted only in 1972. In addition, the decade has seen federal student loan money become an integral part of student financial aid at almost all colleges nationwide.

Educational and general costs per student parallel the income curve. They rose rapidly in the late sixties and early seventies but have been relatively constant since 1974. The maintenance of expenditure levels per student does not contradict the cries of poverty now rising from the campuses. A major strategy of collegiate budget balancing has been to limit faculty pay increases to less than the inflation rate. As a result, the Higher Education Price Index (the index used to adjust these expenditure figures) rose more slowly than the Consumer Price Index. Had the Consumer Price Index been used for these analyses, costs per student would have declined. In effect, college budgets have been balanced by reducing faculty salaries in real terms. Lest the reader shed tears too quickly for faculty, the analysis of salaries shows that average professorial pay increased in the sixties by an amount equivalent to the decline in the seventies. Yet, many faculty will be quick to remind you that the income advantage of other professional groups over faculty has widened substantially since World War II.

Another financial problem area is the maintenance of plant. Again, the simple "percentage" statistics are inadequate for the analytic task. The percent of the budget devoted to "maintenance and operation" of plant has not changed but expenditures per dollar of plant value have declined forty-three percent over the decade. Moreover, if more accurate estimates of plant value were available and if we could unbundle maintenance from other operating costs, the deferred maintenance problems would undoubtedly be even more apparent.

All colleges, and especially private ones, are devoting a larger share of their budget to student aid. The effect is a decline in net tuition revenues. As competition for enrollment increases, net tuition at private colleges may be further reduced. State and federal officials need to understand and incorporate this issue of net tuition as they set public policy.

The balance sheet ratio analyses show that most of the private colleges have been able to consolidate their capital position. Plant debt has been reduced while expendable fund balances have increased in proportion to total expenditures. A larger proportion of the plant is owned in 1980. Non-expendable or capital fund balances represent slightly smaller percent of expenditures in 1980. Colleges should keep an eye on this trend. Specifically, endowment expenditure policies should be reviewed, for it appears as if declines in capital funds are a result of the erosion of endowment. In contrast with other groups of private institutions, the capital structure of the typical Liberal Arts II college lost ground between 1971 and 1974 without any recovery during the remainder of the decade.

CHAPTER THREE
CHANGES IN CAMPUS FUNCTIONING

This chapter summarizes the results of the IFI survey of faculty at the ninety-three participating institutions. Over 6900 full-time faculty responded to the survey when used in the late 1960's and early 1970's and slightly more than 5100 responded again in the 1979-81 period. Changes on the 132 items, the eleven scales, and the Weighted Scales are all used as evidence to assess environmental changes at the ninety-three colleges in the study.

Chart 3-1 shows the profiles of the avarage scores for the first and second administrations of the IFI at all colleges and universities. The horizontal axis is a listing of the eleven scales and the Weighted Scale, the latter being formed from a college's eleven scales using the president's assessment of the importance of each scale to his/her institution. The vertical axis is a percentile ranking based on the original norms established from the thirty-seven institutions that participated in the development of the IFI in 1968.

Presumably, the early IFI scores from our sample of ninety-three institutions should closely approximate the established norms. If this were so, the first IFI profile should be a horizontal line near the middle of the chart. In fact, only four of the eleven average scale scores are within 10 percentiles of the center. Several reasons can be given to explain the discrepancies. First, the ETS sample over-represents prestigious institutions, and does not include any public community colleges. A second reason for these differences is that the results shown here are weighted on the basis of enrollments by Carnegie Classification and sector, and so the results better project to the universe of all institutions. Finally, most of the colleges in this sample used the IFI in the early 1970's and not in the late 1960's. Any systematic changes that occurred in higher education during the few intervening years would skew the baseline data away from the 1968 norm. New normative scales could have been created for this research. The ETS sample was small, only 40 percent as large as the one in this study. Therefore, this sample may constitute a better group for setting normative scales. This was not done because many individuals are familiar with the established IFI norms. Some may wish to compare their own institution's profile with those in the study. A new vertical axis would have complicated such comparisons. For these reasons, ETS's established norms were used for this report's format for all scales except the Weighted Scale, which was established for this study.

SCALE SCORE CHANGES FOR ALL INSTITUTIONS

The interesting aspect of the data on Chart 3-1 is not the variation of the old scores around ETS's "norms." Rather it is the changes measured between the early and late administrations. Comparing the 1980-81 solid line with the earlier dotted line, we can best describe the period as stable. There were changes but they were not as great as one might have imagined. The average scores on the first three scales, Intellectual-Aesthetic Extracurriculum, Freedom, and Human Diversity were essentially unchanged from the early to the late survey. The small increase on Human Diversity was, however, statistically significant. The next three changed more, Concern for Undergraduate Learning rose, and both Concern for Improvement of Society and Democratic Governance fell. All three changes were significant at the .001 level. The Meeting Local Needs scale shows the most movement of any scale. These institutions, just above ETS's norms for the early administration, now stand near the 90th percentile. In contrast, there was no change on the Self-Study and Planning scale and very little change on the Concern for Advancing Knowledge scale. There was a considerable and statistically significant drop on the measure Concern for Innovation. Average a decade earlier, these ninety-three college fell to the 30th percentile. Institutional Esprit also fell somewhat.

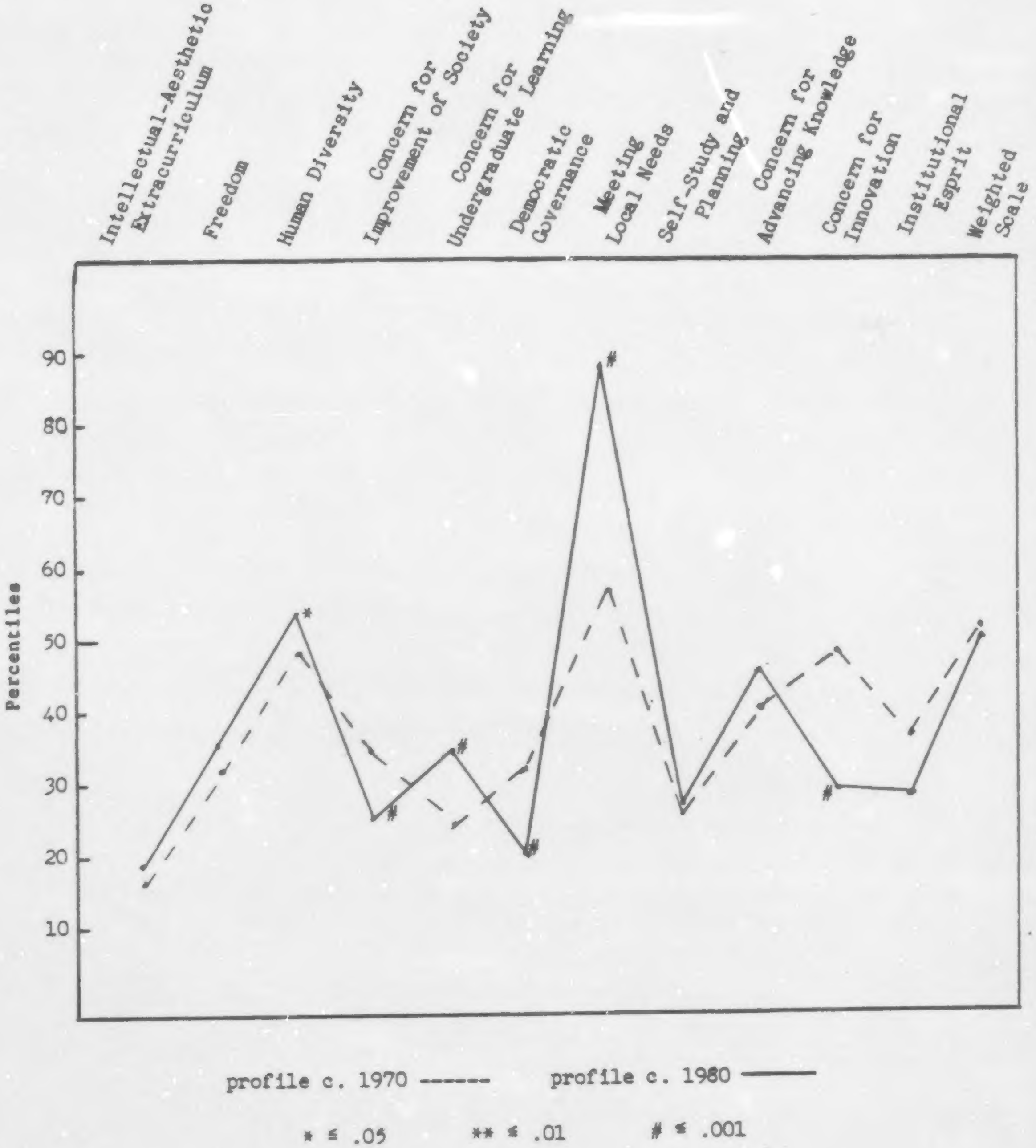
By simply counting rising and falling scale scores, we can see that higher education lost the decade four to two. However, the magnitudes of the changes are different as is the importance of each of the scales. Based on the presidents' assessments, the Weighted Scale score provides a summary statistic. It indicates no change over the decade. As discussed in Chapter One, this statistic may err on the positive side. That is, the presidents' 1980 assessments of the importance of each scale may reflect current institutional goals and not necessarily the goals of a decade ago.

Measured Changes as Evidence of Validity

It is impossible to judge exactly how much confidence should be put in these measured changes. Chapter One discussed the reliability and validity of the IFI data. Accordingly, the scales do seem to reflect what they are intended to measure. The new data provide additional evidence of the validity of the instrument as many of the measured changes coincide with commonly held perceptions about what has occurred in American higher education, and no changes contradict these perceptions. The largest single scale score change is the rise on the Meeting Local Needs scale -- a change greatly supported by the literature, by comments by public and private officials, and

Chart 3-1: Changes on the Institutional Functioning Inventory: All Colleges and Universities

N=93



by statistics.[26] The decline on Concern for Innovation is the second largest measured change, and it also parallels generally held beliefs about recent trends.[27] There may be less consensus about the lessening of democratic governance on campus, but the change is supported by a good deal of anecdotal evidence. When this environmental instrument was developed, ETS performed the expected statistical tests to ensure its validity, and these measured changes provide corroborative evidence.

Responses to the Items

The IFI scale scores are interesting and very useful in summarizing the data. The scale summaries, however, cannot fully convey the information that is available from the 132 items of the instrument. *This section reviews items for which there has been a change of 5 percentage points or more in the answering pattern of respondents.* Occasionally, items with less variation are reviewed when they serve useful explanatory purposes. For example, sometimes the lack of change on one item helps illuminate the changes on other items. This item review is important because the scales are not necessarily unidimensional and because of relationships between the scales. The term "keyed" direction refers to ETS scoring procedures. For most items, positive responses increase the scale score. For some items, negative responses increase the scale score. The "keyed" direction is any change, positive or negative, that increases the scale score.

Intellectual-Aesthetic Extracurriculum

The Intellectual-Aesthetic Extracurriculum scale, measuring cultural and non-classroom educational activities on campus, showed no significant movement during the decade. The weighted average for these institutions remained at about the 17th percentile. The average score is low in comparison to the ETS's norms because of the sample ETS used to set the norms. The group of institutions ETS used in the preliminary comparison group included no community colleges and a disproportionately large number of selective and research-oriented campuses. Regardless of the level of the average scale score, the trend data for the individual items on this scale is interesting and highlight what is (or may be) happening on campuses across the country. Table 3-1 lists all seven items on the scales showing a change of 5 percentage points or more. Items 1, 5, 14, 20, and 21 are the only items on the scale that mention the fine and performing arts. Four of those five items increased. Only the item asking about foreign films evidences a cultural decline. In contrast, items 15 and 56 concern intellectual extracurricular activities, with faculty perceiving less activity at the end of the decade. Admittedly, the changing newspaper articles (item 56) may say more about students declining interest in social and political issues than it does about a reduced interest in intellectual activities. However, the IAE scale contains two other items that specially relate to extra-curricular intellectual concerns. One asks about students meeting to discuss philosophical topics. The other probes the number of scholars and scientists invited to speak on campus. In both cases fewer faculty responded in the "keyed" direction (about 3 percent).

---

[26] Richard E. Anderson, "New Competition for an Old Market," *Lifelong Learning*, Vol. 25, No. 5, 1980.

[27] David Riesman, *On Higher Education* (San Francisco: Foundation for the Advancement of Teaching/Jossey-Bass, 1980).

Table 3-1: Items on the Intellectual-Aesthetic Extracurriculum Scale for which Responses Changed at least 5 Percentiles

		Percent Answering "yes" or "agree/strongly agree"	
Item No.	Item	Early Admin.	Late Admin.
1	There is a campus art gallery in which traveling exhibits or collections on loan are regularly displayed.	58	63
5	Foreign films are shown regularly on or near campus.	48	42
14	At least one modern dance program has been presented in the past year.	46	54
15	Students publish a literary magazine.	65	60
20	At least one serious classical music concert has been given within the past year.	86	78
21	At least one poetry reading, open to the campus community, has been given within the past year.	54	60
56	The student newspaper comments regularly on important issues and ideas (in addition to carrying out the more customary tasks of student newspapers).	62	55

The shifting percentages are too small to warrant our climbing out on a "judgmental limb." The evidence may be summarized best as being suggestive of the hypothesis that there has been a shift from intellectual to artistic preferences and activities on American campuses during the 1970's.

Freedom

The Freedom scale attempts to measure the amount of official constraint on faculty and students as they pursue different intellectual and personal life styles. As a whole, the average scale score shows no change.

Table 3-2 lists the four items for which responses in the "keyed" direction were up or down at least 5 percentage points. Item 71 indicates that fewer faculty were reprimanded for public dissent. This may be at least a partial result of the end of the unpopular Vietnam war -- a war that provoked considerable dissent by both the faculty and the students. On the other hand, items 47 and 72 suggest less toleration for *student* dissent. When asked about administrative disapproval of "eccentric or unpopular beliefs" of faculty (item 55), professors indicated no change over the decade. Student dress received less official attention as noted in item 8.

Table 3-2: Items on the Freedom Scale for which Responses Changed at least 5 Percentiles

Item No.	Item	Percent Answering "yes" or "agree/strongly agree" Early Admin.	Late Admin.
8	There are no written regulations regarding student dress.	57	69
47	Radical social or political organizations are not, or probably would not be, allowed to organize units on this campus.	40	46
71	Institutional authorities have reprimanded faculty members who have publicly registered their dissent concerning policies of the state or federal government.	13	7
72	Unorthodox student life styles tend to be viewed with disfavor by institutional authorities.	30	49

Human Diversity

The Diversity scale exhibits only minor change between the early and late administration. Items 19 and 53 listed on Table 3-3 provide evidence that colleges are drawing more students from diverse social and economic backgrounds but that less political diversity (item 35) is prevalent. This scale provides some additional evidence that student, as opposed to faculty diversity has received less acceptance. Forty-eight percent of the respondents believed that faculty were sought with a particular set of values (item 40). In 1980 that percentage has fallen to 42 percent. Although more respondents indicated that "students or faculty" with unusual characteristics would be urged not to stay (37 percent to 47 percent on item 65), the changing toleration may be more directed toward students. Recall that in response to item 55 of the Freedom scale, faculty believe that their colleagues with eccentric or unpopular belief were subject to no more official reprobation over the decade.

Does all this show a real divergence between the academic freedom

Table 3-3: Items on the Human Diversity Scale for which Responses Changed at least 5 Percentiles

Item No.	Item	Percent Answering "yes" or "agree/strongly agree"	
		Early Admin.	Late Admin.
19	A concerted effort is made to attract students of diverse ethnic and social backgrounds.	46	51
35	A visitor to this campus would most certainly notice the presence of poets, painters, and political activists.	17	11
40	When recruiting new faculty, care is taken to seek candidates with a particular set of personal values.	47	42
53	Compared with most other colleges, fewer minority groups are represented on this campus.	53	48
65	Students or faculty members whose records contain suggestions of unusual characteristics - e.g., bizarre activities, unpopular ideas - are not encouraged to remain here.	37	47

granted faculty and student respectively? Has student behavior come under stricter control? The data are too scanty to do more than suggest support for this tantalizing hypothesis. If this lower toleration for student diversity is true, however, it would be interesting to see how it is manifested in FTE-hungry institutions?

Concern for Improving Society

The Concern for Improving Society scale declined substantially and it is not surprising that the scale items show broad consensus. Nine items (Table 3-4) changed more than 5 percentage points; only item 24 rose in the keyed direction, and it has an historical context. That is, over the 1970's, more faculty had an opportunity to become involved with such programs as Head Start, CETA, and other Great Society programs. Even if fewer faculty are involved currently, it is understandable that a greater number have been involved. All other items on the scale evidence less concern with changing the national and the world economic, social, and political order. This is true whether the questions ask about intent and ideals (items 27, 34, 52, 69, or 70) or whether they probe into specific programs and actions (items 3, 12, 18).

Putting new dimensions on the same items, faculty respondents see less concern for the improvement of society among every constituent group. Students (item 12), administrators (item 34), trustees (item 70), and faculty (items 27, 34, and 69) all showed measured declines in improving society.

Table 3-4: Items on the Concern for Improvement of Society Scale for Which Responses Changed at least 5 Percentiles

		Percent Answering "yes" or "agree/strongly agree"	
Item No.	Item	Early Admin.	Late Admin.
3	There are programs and/or organizations at this institution that are directly concerned with solving pressing social problems, e.g., race relations, urban blight, rural poverty, etc.	64	52
12	Quite a number of students are associated with organizations that actively seek to reform society in one way or another.	37	25
18	This institution, through the efforts of individuals and/or specially created institutes or centers, is actively engaged in projects aimed at improving the quality of urban life.	45	29
24	A number of faculty members or administrators from this institution have gone to Washington to participate in planning various government programs.	9	22
27	Many faculty members would welcome the opportunity to participate in laying plans for broad social and economic reforms in American society.	63	55
34	Application of knowledge and talent to the solution of social problems is a mission of this institution that is widely supported by faculty and administrators.	50	44
52	The notion of colleges and universities assuming leadership in bringing about social change is not an idea that is or would be particularly popular on this campus.	37	42
69	Most faculty on this campus tend to be reasonably satisfied with the status quo of American society.	55	60
70	The governing board does not consider active engagement in resolving major social ills to be an appropriate institutional function.	43	49

Concern for Undergraduate Learning

The Concern for Undergraduate Learning scale attempts to gauge the efforts devoted toward undergraduate instruction. It includes items on faculty attitudes and behavior and items on administrative policies that bear on the issue. The overall change is positive in direction but modest in amount. This increase is important, nonetheless, because undergraduate instruction is the most important goal area for most American colleges. An analysis of the scale items shows that attention to undergraduate instruction may have risen even more than suggested by the change in the full scale score. Item 6 on Table 3-5 asks about procedures that allow students to introduce courses -- a particular concern of the "relevance seeking" students of the sixties. Eleven percent fewer faculty in 1980-81 perceived these procedures to be in place. Items 32, 51, and 68 (not on Table 3-5), inquiring about interactions between students and faculty outside of class, show little difference from the early to the late administrations. Six of the remaining eight items have increased 5 percentage points or more and support the proposition of increased concern for students. In the early seventies, 22 percent of the faculty acknowledged that many of their colleagues were not concerned with how to best communicate knowledge to students. That percentage fell to 17 percent in 1980. When asked about administrative action on promotion, a greater percent of these professors believed teaching to be the most important criterion (38 percent to 45 percent on item 17).

These changes are important and the items on instructional emphasis show consensus. Undergraduate students seem to have received increased attention during the decade. This is probably a positive aspect of the "buyer's market" in higher education.

Democratic Governance

Although the average scale scores declined only 11 deciles, each of the twelve items changed against the keyed direction -- i.e. evidenced less democratic governance. The eight items meeting the 5 percentage point threshold criterion are listed on Table 3-6. When queried generally about administrative control (items 38,41,46, and 48), a larger percent of the faculty responding in 1980-81 perceive that control, power and decision making are closely held by college administrators and, perhaps, other small groups of individuals like union leaders and system-wide administrators. These items, however, just meet the five percentage point threshold. The percentages of faculty believing that student opinions are seriously solicited (item 29) and considered (item 44) decreased far more (10 and 9 percentage points, respectively). When faculty members are specifically asked about their own participation, a smaller proportion of professors believe that there

Table 3-5: Items on the Concern for Undergraduate Learning Scale for Which Responses Changed at least 5 Percentiles

Item No.	Item	Percent Answering "yes" or "agree/strongly agree" Early Admin.	Late Admin.
6	There are established procedures by which students may propose new courses.	43	32
17	Faculty promotion and tenure are based primarily on assessments of teaching effectiveness.	38	45
33	Senior professors seldom teach freshman or sophomore courses.	15	10
37	Either tutorials or extensive independent studies are important features of the undergraduate curriculum.	49	54
45	How best to communicate knowledge to undergraduates is not a question that seriously concerns a very large proportion of the faculty.	22	17
49	Professors get to know most students in their undergraduate classes quite well.	72	78
59	Most faculty members are quite sensitive to the interests, needs, and aspirations of undergraduates.	83	89

Table 3-6: Items on the Democratric Governance Scale for Which Responses Changed at least 5 Percentiles

Item No.	Item	Percent Answering "yes" or "agree/strongly agree" Early Admin.	 Late Admin.
29	Meaningful arrangements exist for expression of student opinion regarding institutional policies.	82	72
38	This institution tends to be dominated by a single "official" point of view.	44	49
41	Power here tends to be widely dispersed rather than tightly held.	39	33
44	Serious consideration is given to student opinion when policy decisions affecting students are made.	74	65
46	In reality, a small group of individuals tends to pretty much run this institution.	61	66
48	Governance of this institution is clearly in the hands of the administration.	65	70
57	There is wide faculty involvement in important decisions about how the institution is run.	52	45
67	A concept of "shared authority" (by which the faculty and administration arrive at decisions jointly) describes fairly well the system of governance on this campus.	64	44

is "wide faculty involvement" in important decisions about how the college is run (52 percent to 45 percent on item 57). Perhaps even more telling is the 20 percentage point drop in faculty believing that the "concept of 'shared authority' (by which the faculty and administration arrive at decisions jointly) describes fairly well the system of governance on this campus" (item 67). Item 57 records a decline in perceived faculty *involvement* while item 67 documents a much greater drop in perceived *authority*.

The conclusion is that campuses were governed less "democratically" at the end of the decade than they were in the beginning. In the United States as in most countries with a representative system of government, "democratic institutions" are perceived favorably, and there is a pejorative connotation to the absence of democracy. Yet we need not necessarily view the decline in campus democracy totally unfavorably. After all, we do not expect the military or businesses to be democratic in most of their procedures. Similarly, it is not categorically bad that colleges have become somewhat less democratic, and from a managerial point of view there might be some good aspects. Still, there are administrative implications regarding faculty effectiveness in all this. If faculty members expect authority, and if administrators lack effective controls over faculty behavior, the absence of democratic governance can be institutionally debilitating. This argument will be pursued in more detail in Chapters Six and Seven.

Meeting Local Needs

The Meeting Local Needs scale is another scale with item concordance. All but two items support the proposition that colleges are doing more to meet local needs. One item that did not change inquires about the geographic accessibility of the campus. It would have been quite surprising had there been significant changes on this item. The other item that shows no change asks about the institutional desire to serve the ablest students. The other ten items moved in the keyed direction -- most with substantial shifts in the percentage of faculty perceiving the change. Items 80, 86, and 95 of Table 3-7 specifically chronicle the special outreach to area businesses. Although a larger percentage of faculty members perceive their college's curricula as serving students of a range of abilities (item 91), there is an even greater increase (25 percentage points) of faculty who note the existence of remedial programs (item 119). The implication is that the diversification of student academic ability is less noticeable than is its decline. The remaining five items ask about other services to the local population (facilities, programs, evening courses, etc.). The changing response patterns of faculty on these items show clearly the increased institutional efforts to reach and serve area adults.

Self Study and Planning

Although the average scale score has remained unchanged over the decade, four items (see Table 3-8) do show some change. Items 76 and 84 indicate that colleges are more likely to have, to publish, and to distribute, a "long-range plan." Paradoxically, real planning does not appear to have increased. There is less discussion about future institutional mission (item 108) and no changes on most of the other scale items. Item 103 suggests that colleges are responding more to internal and external pressures than they are pursuing a mission based simply on desirable educational goals.

Concern for Advancing Knowledge

Most of the ninety-three institutions in the sample are teaching institutions, and advancing knowledge and associated research would not be expected to be a major emphasis. It is surprising, therefore, that the earlier scale score stood at the 40th percentile and the later scale score at the 46th percentile. The items listed on Table 3-9 give evidence of minor split between faculty and trustees and administrators. On the one hand, faculty

Table 3-7: Items on the Meeting Local Needs Scale for Which Responses Changed at least 5 Percentiles

		Percent Answering "yes" or "agree/strongly agree"	
Item No.	Item	Early Admin.	Late Admin.
73	This institution operates a program of evening courses open to local area residents.	86	79
75	Courses are offered through which local area residents may be retrained or upgraded in their job skills.	44	62
77	Counseling services are available to adults in the local area seeking information about educational and occupational matters.	39	59
80	There is a job placement service through which local employers may hire students for full- or part-time work.	75	82
83	Facilities are made available to local groups and organizations for meetings, short courses, clinics, forums, and the like.	74	81
86	There are a number of courses or programs that are designed to provide manpower for local area business, industry, or public services.	42	59
87	Courses dealing with artistic expression or appreciation are available to all adults in the local area.	48	60
91	The curriculum is deliberately designed to accommodate a great diversity in student ability levels and educational-vocational aspirations.	52	59
95	Attention is given to maintaining fairly close relationships with businesses and industries in the local area.	49	63
119	There are no courses or programs for students with educational deficiencies, i.e., remedial work.	37	12

seem more inclined toward knowledge-producing activities (items 79 and 82); yet trustees and administrators seem less committed (items 99 and 129). The explanation may be that faculty may perceive the need to be academic "triple threats" -- teaching, service, and scholarship -- in order to succeed professionally in a worsening labor market. Trustees and administrators, in contrast, may wish to bolster teaching because it is the primary source of revenue. Item 74 indicates government grant and contract funds are increasing. This may be a misleading item for this scale if the increase is a result of Title III, FIPSE, and training grants rather than research money.

Items 94 and 109 ask about the availability of labs and computers. The

Table 3-8: Items on the Self-Study and Planning Scale for Which Responses Changed at least 5 Percentiles

Item No.	Item	Percent Answering "yes" or "agree/strongly agree" Early Admin.	Late Admin.
76	There is a long-range plan for the institution that is embodied in a written document for distribution throughout the institution.	40	57
84	The institution has a long-range plan based on a reasonably clear statement of goals.	58	65
103	The change that has taken place at this institution in recent years has been more the result of internal and external influences than of institutional purposes (and deliberate planning based thereon).	55	63
108	Currently there is wide discussion and debate in the campus community about what the institution will or should be seeking to accomplish five to ten years in the future.	60	54

Table 3-9: Items on the Concern for Advancing Knowledge Scale for Which Responses Changed at least 5 Percentiles

Item No.	Item	Percent Answering "yes" or "agree/strongly agree" Early Admin.	Late Admin.
74	Government or foundation research grants comprise a substantial portion of the institution's income.	16	24
79	A number of departments frequently hold seminars or colloquia in which a visiting scholar discusses his ideas or research findings.	46	51
82	Quite a number of faculty members have had books published in the past two or three years.	23	32
94	Extensive laboratory facilities exist for research in the natural sciences.	36	29
99	In general, the governing board is committed to the view that advancement of knowledge through research and scholarship is a major institutional purpose.	46	36
109	Professors engaged in research that requires use of a computer have easy access to such equipment.	59	70
129	Senior administrators do not consider advancement of knowledge through research to be an important institutional purpose.	41	48

changing responses again conform to generally held perceptions of trends.

Computers are, in fact, more available. Whether the proliferation of computer technology at colleges has kept pace with advances in the state of the art is not answered by item 109. Item 94 gives evidence that laboratories for natural sciences are less adequate at the end of the decade.

Concern for Innovation

The Innovation scale declined from the 50th to the 30th percentile of the ETS norms with all eight of the items on Table 3-10 supporting this trend. Items 98 and 107 specifically ask about major changes that have recently taken place, and both show large shifts in the percentage of faculty recognizing such changes. The degree of complacency (item 124) has measurably increased on American campuses. Item 113 suggests that academic changes are somewhat more likely to be made on the basis of financial criteria in 1980.

Table 3-10: Items on the Concern for Innovation Scale for Which Responses Changed at least 5 Percentiles

		Percent Answering "yes" or "agree/strongly agree"	
Item No.	Item	Early Admin.	Late Admin.
96	There is a general willingness here to experiment with innovations that have shown promise at other institutions.	81	74
98	In the last few years, there have been a number of major departures from old ways of doing things at this institution.	28	53
101	High-ranking administrators or department chairmen generally encourage professors to experiment with new courses and teaching methods.	77	70
107	There have been few significant changes in the overall curriculum in the past five years.	25	43
113	Proposed curricular changes seem to be accepted or rejected more on the basis of financial considerations than of assumed educational merit.	42	47
114	The curriculum committee of the college concerns itself with basic curriculum issues rather than, for example, merely approving or disapproving new courses.	60	55
120	This institution would be willing to be among the first to experiment with a novel educational program or method if it appeared promising.	58	48
124	There is an air of complacency among many of the staff, a general feeling that most things at the college are all right as they are.	36	43

Institutional Esprit

The Institutional Esprit scale is really a multi-dimensional scale attested to by the items on Table 3-11. "Spirit" is probably best measured simply by item 123. The percent agreeing that faculty morale is high fell from 61 to 51 percent -- an important decline. Parallel to this decrease in morale, we find fewer faculty with confidence in their administrations (items 97, 104, and 116). And faculty are less committed to their institution's mission (76 percent to 71 percent on item 126). In spite of these changes, a sense of community has risen slightly (58 percent to 60 percent on item 122 not shown) and, importantly, slightly more faculty members believe that their college is successful "in achieving its various goals" (70 to 72 percent on item 112, not shown).

Table 3-11: Items on the Institutional Esprit Scale for Which Responses Changed at least 5 Percentiles

		Percent Answering "yes" or "agree/strongly agree"	
Item No.	Item	Early Admin.	Late Admin.
97	Most faculty members consider the senior administrators on campus to be able and well-qualified for their positions.	66	57
104	Generally speaking, top-level administrators are providing effective educational leadership.	62	54
116	Close personal friendships between administrators and faculty members are quite common.	61	55
123	In general, faculty morale is high.	61	51
126	The faculty in general is strongly committed to the acknowledged purposes and ideals of the institution.	76	71

American higher education is comprised of a wide variety of institutional types. Reports on large aggregations of colleges and universities can distort and obscure trends within segments. Charts 3-2 and 3-3 provide IFI weighted average profiles for public and private institutions. Charts 3-3 through 3-11 give average IFI scale scores for public and private institutions by Carnegie Classification. The discussion of those charts will focus primarily on major discrepancies from the IFI profile of all colleges.

PUBLIC AND PRIVATE INSTITUTIONS

Independent and state supported institutions differ more with respect to the absolute levels of their profiles than they do with respect to the changes that have occurred. (See Charts 3-2 and 3-3.)

Public colleges, understandably, exhibit higher average scores on the Human Diversity and the Meeting Local Needs scales. The smaller, more residential private colleges score higher on Concern for Undergraduate Learning and Institutional Esprit. The changes occurring over the decade are quite similar at both sets of institutions although they sometimes differ in degree.

Public and Private colleges show increases of approximately the same magnitude on the Concern for Undergraduate Learning and the Human Diversity scales and comparable declines on the Democratic Governance Scale. Independent colleges rose more on the Self-Study and Planning scale and also on Meeting Local Needs. Part of the explanation for the latter is that public colleges were so involved in continuing education and related activities in the early 1970's that increases were not as noticeable. Average scores on Concern for Improvement of Society and Concern for Innovation slipped in both sectors with the declines in the private sector being somewhat larger. Item responses provide additional useful details. For example, item 18 asks about college involvement in improving urban life. At the publicly supportad colleges, there is an 8 percentage point decline in faculty members acknowledging less involvement. At private institutions the decline is 20 percent.

Similarly, in terms of innovation, we find a 30 percentage point drop in private college professors responding that there are "major departures from old ways of doing things." At public colleges the decline is only 10 percentage points.

On the Intellectual-Aesthetic Extracurriculum, Self Study and Planning, Concern for Advancing Knowledge and Institutional Esprit scales neither sector showed much change.

Only on the Freedom scale do the sectors diverge in direction significantly. The public sector is up 7 percentiles and the private sector down in equal amount. Item 61 asks if faculty feel free to express radical political beliefs in their classrooms. Roughly two-thirds of both the public and private sectors acknowledge this freedom, but the trends are different. In 1980 slightly more faculty members in the public sector affirm this freedom. In the private sector fewer faculty members in 1980 feel free to express radical political beliefs. Similarly, there has been a slight decrease in the acceptance of nonconformist student styles in public colleges (down 7 per-

Chart 3-2: Changes on the Institutional Functioning Inventory:
Public Colleges and Universities
N=35

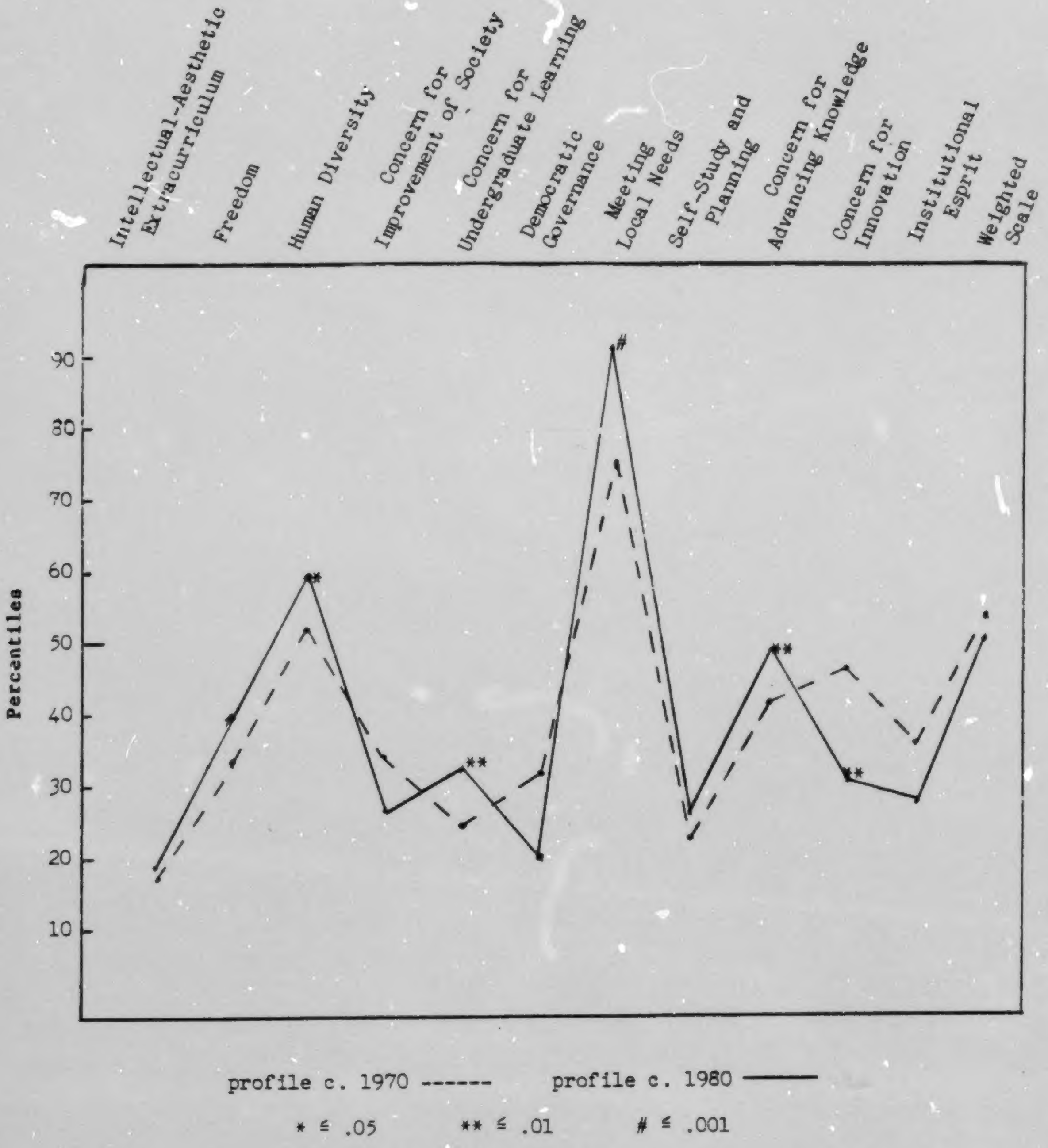
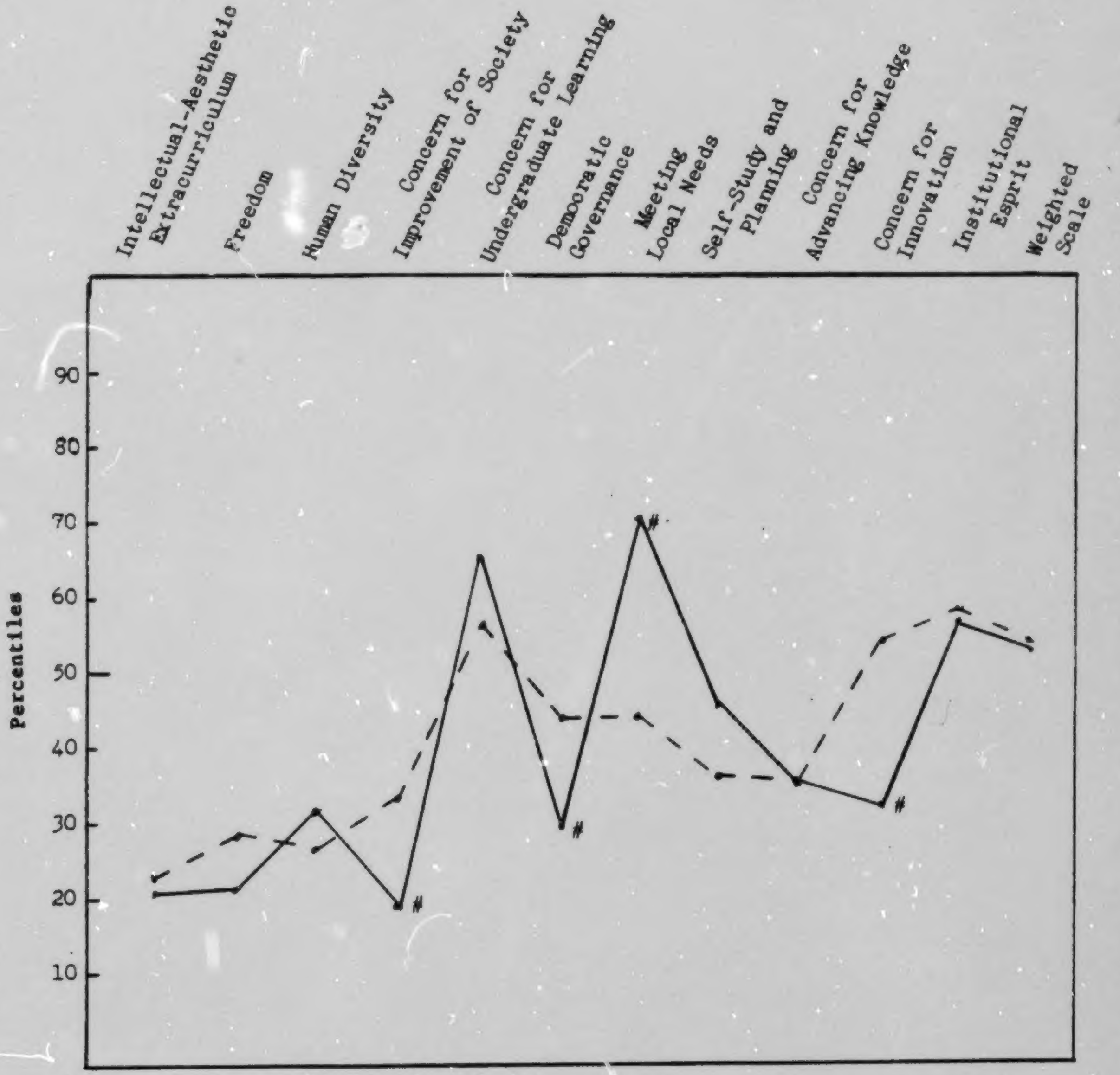


Chart 3-3: Changes on the Institutional Functioning Inventory: Private Colleges and Universities

N=58



profile c. 1970 ------ profile c. 1980 ———

* ≤ .05 ** ≤ .01 # ≤ .001

centage points) compared with a much more severe decline at private institutions (down 19 percentage points)

Public Institutions by Carnegie Classification

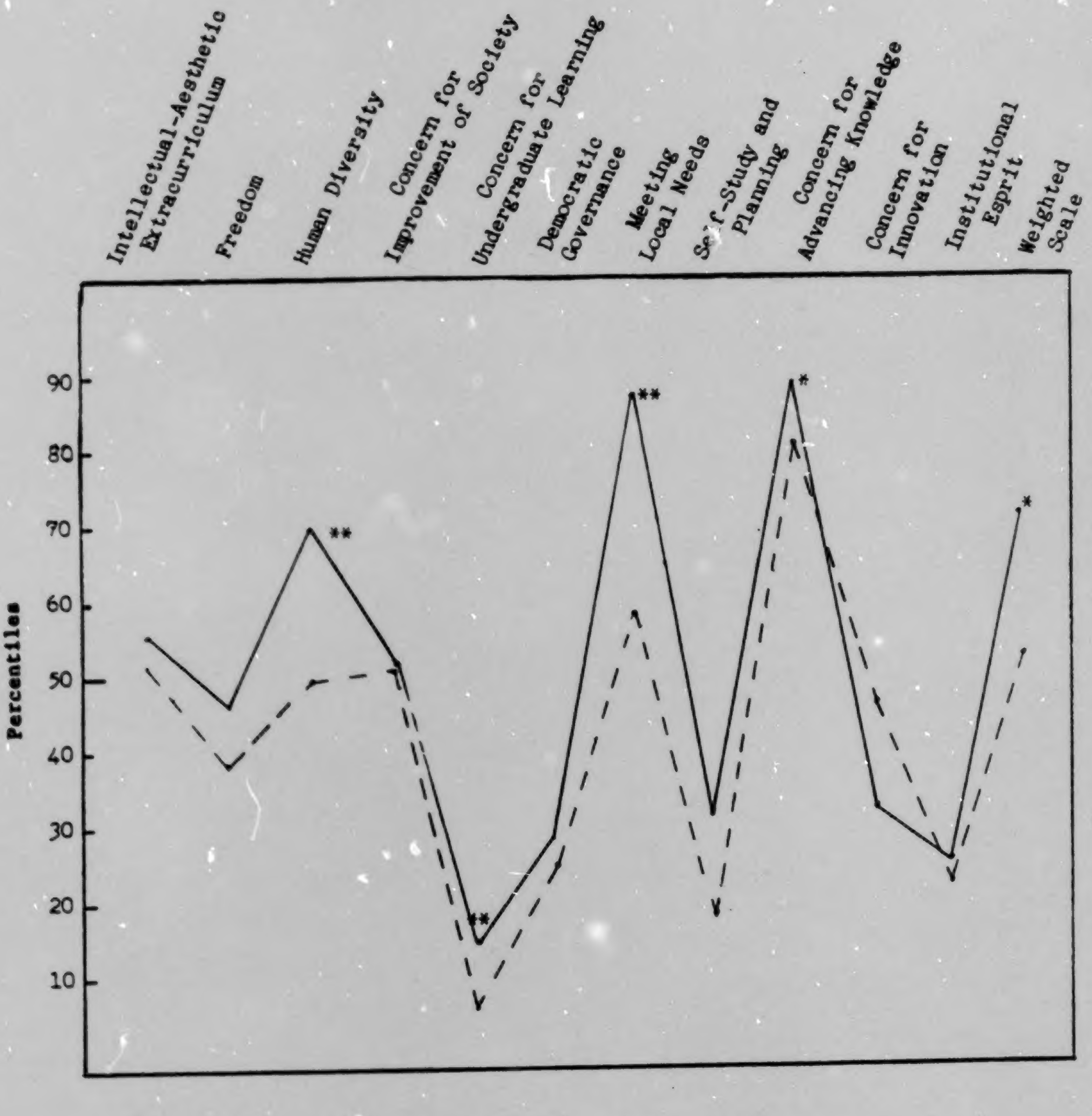
The chronicle of changing faculty opinions of public college operations is indeed a story of institutional type. Public colleges as a whole have been stable. Examining the data by Carnegie Classification, however, offers new insights, as evidenced on Charts 3-4 through 3-6.

Public Research and Doctoral Institutions These research institutions emerged from the decade in apparently better condition than at the start. Only one average score, that measuring Concern For Innovation, declined. Some of the changes are slight but run counter to the trends at most other types of colleges. The stability of the Concern For Improvement of Society scale is an example of such a change. The average score for every other group of institutions declined on this scale. It is unchanged over the decade at research oriented public universities. According to the perceptions of faculty members, it seems that administrators and trustees are at least partially responsible. Item 34 asks about faculty and administrators support for "solving social problems." The number agreeing rose from 49 to 50 percent. Support declined at all other institutions. Probing for resistance from the governing board, item 70 shows that professors at the public research institutions notice less trustee opposition (35 percent to 33 percent) while those at all other institutional types notice more (43 percent to 49 percent). The Human Diversity scale and the Meeting Local Needs scales increased substantially, suggesting that these larger institutions are competing more with community colleges for disadvantaged and older students. For example on item 2, more faculty members observe the existence of disadvantaged students (61 percent to 74 percent), and more are aware of remedial programs (77 percent to 93 percent on item 119). There is a 36 percentage point increase in professors citing strong efforts by these universities "to attract students of diverse ethnic and social backgrounds" (item 19.) The changes are not limited to the types of students they seek; these universities are also changing how they compete. In the early administration 79 percent cited the existence of an adult program with evening courses. That figure is now 96 percent (item 73)

These large state universities scored at the 86th percentile on the Concern for Advancing Knowledge scale. In 1980 the average scale score was slightly higher. Concern for Undergraduate Learning, historically low at these universities, rose about 7 percentage points. The Institutional Esprit scale was up marginally. However, faculty morale declined quite significantly. In the early administration, 54 percent agreed that faculty morale was high, but only 40 percent agreed at the end of the 1970's.

Chart 3-4: Changes on the Institutional Functioning Inventory: Public Research and Doctoral Universities

N=6



profile c. 1970 ------ profile c. 1980 ———

* ≤ .05 ** ≤ .01 # ≤ .001

103

Chart 3-5: Changes on the Institutional Functioning Inventory: Public Comprehensive Universities

N=19

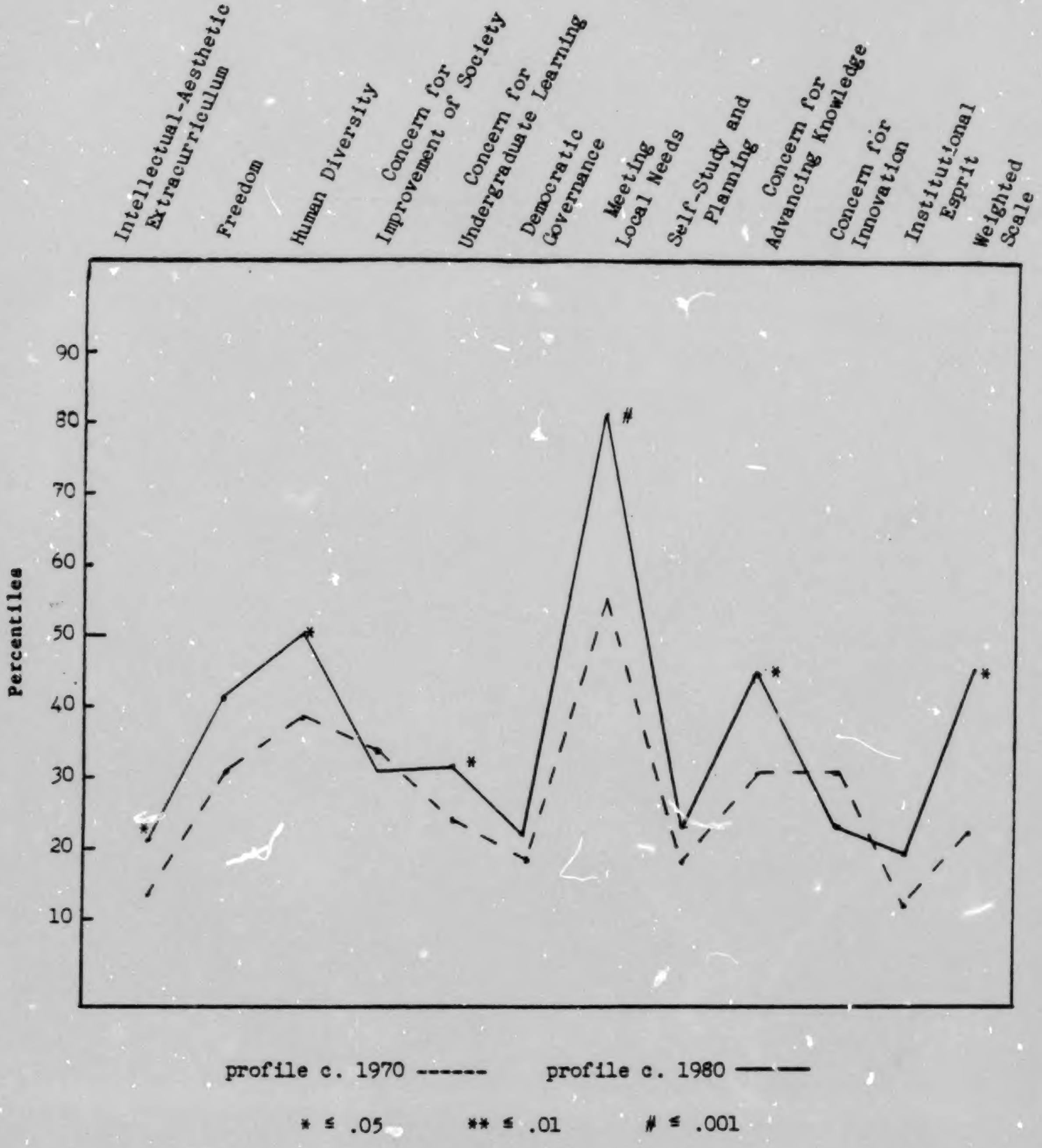
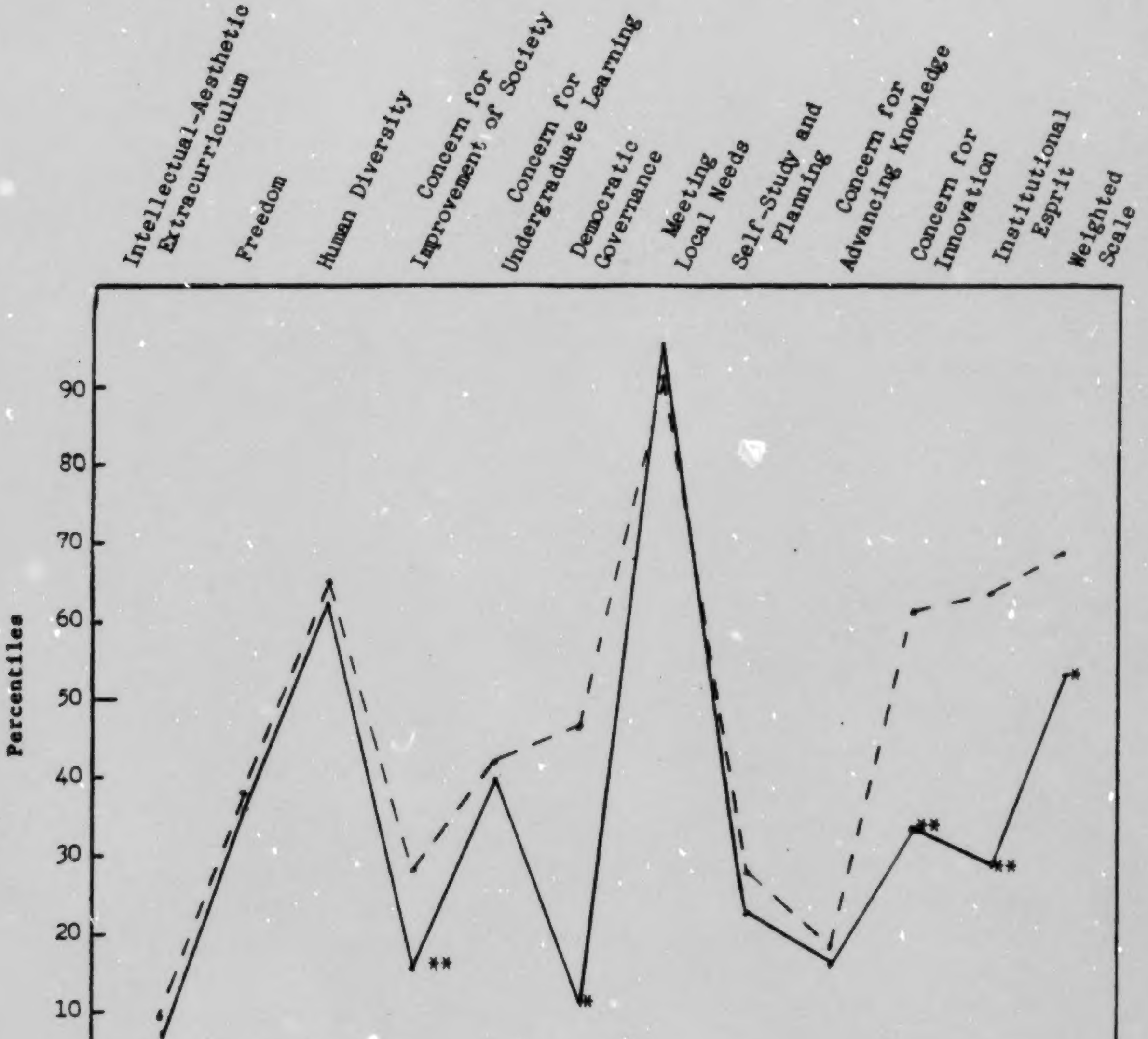


Chart 3-6: Changes on the Institutional Functioning Inventory:
Public Two-Year Colleges
N=10



profile c. 1970 ------ profile c. 1980 ———

* ≤ .05 ** ≤ .01 # ≤ .001

The president's Weighted Scale score rose from the 51st to the 71st percentile This summary statistic of change and most of the other measures of campus environment provide evidence that these large public universities emerged from the decade in rather good condition

Public Comprehensive Colleges and Universities These former teachers colleges, which now have expanded their missions also show largely positive changes The Democratic Governance and Concern for Improvement of Society scales did not change The Concern for Innovation dropped, but other changes were all positive and, in several instances, surpassed those of the public research universities Again, there are fairly substantial increases on the Human Diversity and Meeting Local Needs scales. The same items attest to the possibility of greater competition with public community colleges. A larger proportion of faculty members observe disadvantaged students, (63 percent to 70 percent on item 2), and many more are aware of remedial programs (69 percent to 92 percent on item 119). There is a twelve percentage point increase in faculty observing strong efforts "to attract students of diverse ethnic and social backgrounds" (item 19). Evening courses for area residents were commonly seen at the colleges in 1970 (74 percent on item 73) Now they are almost unanimously observed (94 percent).

Contrary to the trends at most groups of colleges, the Concern for Advancing Knowledge scale rose significantly. Item 99 shows no change in trustee support of research but it does show a twelve percentage point increase in faculty citing administrative support. Indeed, more faculty believe promotions to be based primarily on scholarship (8 percent to 15 percent on item 90) A larger proportion of the faculty believe that "many" of their colleagues have published books recently (24 percent to 32 percent on item 82).

Community Colleges Seven of the eleven scale scores are essentially unchanged In contrast with other publicly supported colleges, however, several scales have declined measurably. The Concern for Innovation scale fell 30 percentiles -- a change that seems ironic considering the historical perception of community colleges as adaptable institutions.[28] Democratic Governance has fallen 35 percentiles. In the early administration 55 percent of the faculty members described governance as one in which faculty and administration shared authority. In the latest survey only 30 percent perceive this sharing The slide of the Institutional Esprit scale was even more pronounced -- 38 percentiles. The professors at these ten institutions have lost confidence in their administration. For example, 45 percent of the faculty believe their administrators offer effective leadership compared with 65 percent a decade ago (item 104). Morale has declined more than in any other group of colleges studied (65 percent to 41 percent on item 123). Why public community college faculty should be so dispirited is not clear. Some tentative explanations are offered in Chapter Seven.

---

[28] James W. Thornton, Jr., *The Community Junior College* (New York: John Wiley, 1960) p.32.

The difference in trends between community colleges and other public institutions is so striking that the possibility that the data are in error has been considered. There are no comparable measures of environmental change. ETS has, however, recently compiled new normative data for community college.[29] The new norms were established by averaging the scores from twenty-one public two-year colleges that used the IFI between 1977 and 1982. Eight of those are colleges from this study, the remaining thirteen are not. The average scale scores for the sample of twenty-one institutions coincides almost perfectly with the new average scores of the sample of ten used in this study. Only the Freedom scale score differs by more than 5 deciles -- the average score on that scale for the sample of 21 falls 20 deciles below that of the sample in the study. The close fit on ten of eleven scales is additional support that community college environments have become particularly unsettled during the 1970's.

Private Institutions by Carnegie Classification

The story of changes at private colleges is not so neat nor so simple as the one at public institutions. (See Charts 3-7 through 3-11.) There are several reasons for this complexity. First, the numbers of private research universities and two-year colleges in the sample are very small. Then, too, the Carnegie Classification does not fit the private colleges as well as it does those in the public sector -- particularly in the middle ranges. For example, the public comprehensive colleges are very similar to each other in their history and current mission[30] while the private comprehensive colleges are much more diversified. Some have a long history as universities; others are liberal arts colleges to which graduate programs have been added. Quite a few of these private "comprehensive colleges" more closely resemble liberal arts colleges than universities. Some have a strong religious heritage.

In spite of these classification and sample problems, there is a good deal of consensus across the groups. The changes on most of the scales

---

[29] *Comparative Data, Institutional Functioning Inventory, Community* Colleges (Princeton, N.J.: Educational Testing Service, 1982).

[30] Christopher Jencks and David Riesman, *The Academic Revolution* (Garden City, NY: Doubleday, 1968) p. 232.

Chart 3-7: Changes on the Institutional Functioning Inventory: Private Research and Doctoral Universities

N=2

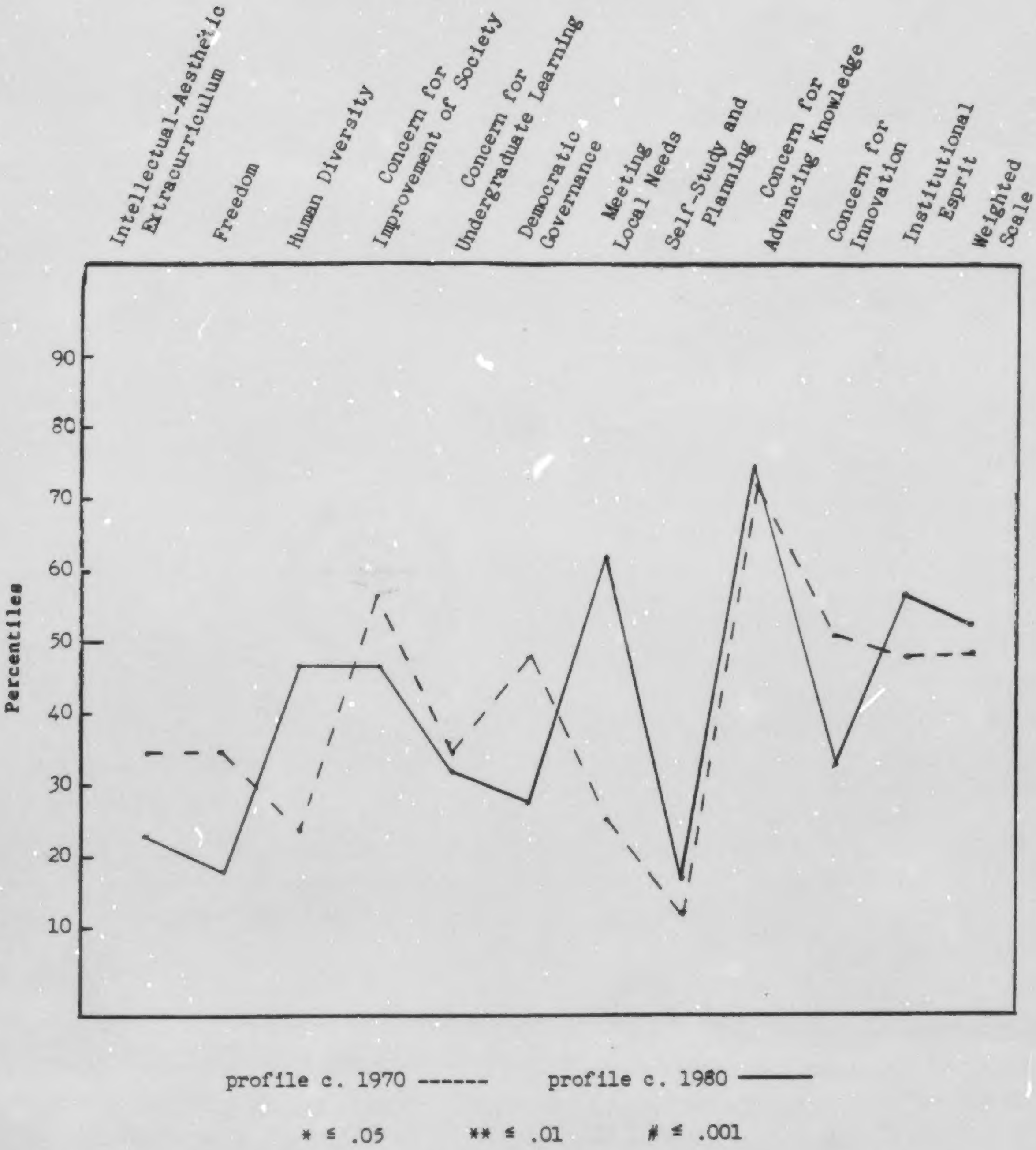


Chart 3-8: Changes on the Institutional Functioning Inventory:
Private Comprehensive Universities
N=24

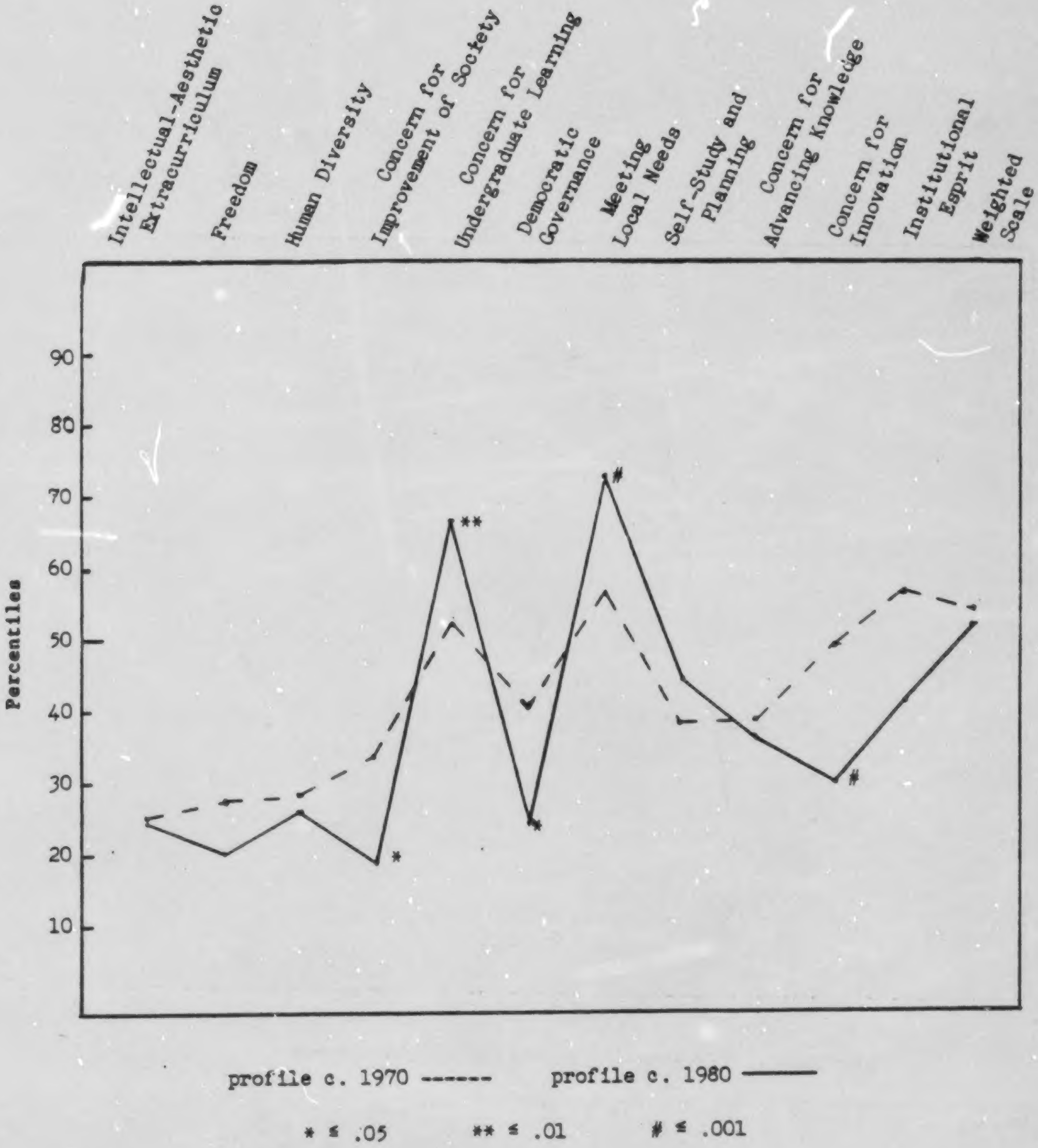


Chart 3-9: Changes on the Institutional Functioning Inventory: Private Liberal Arts Colleges I

N=11

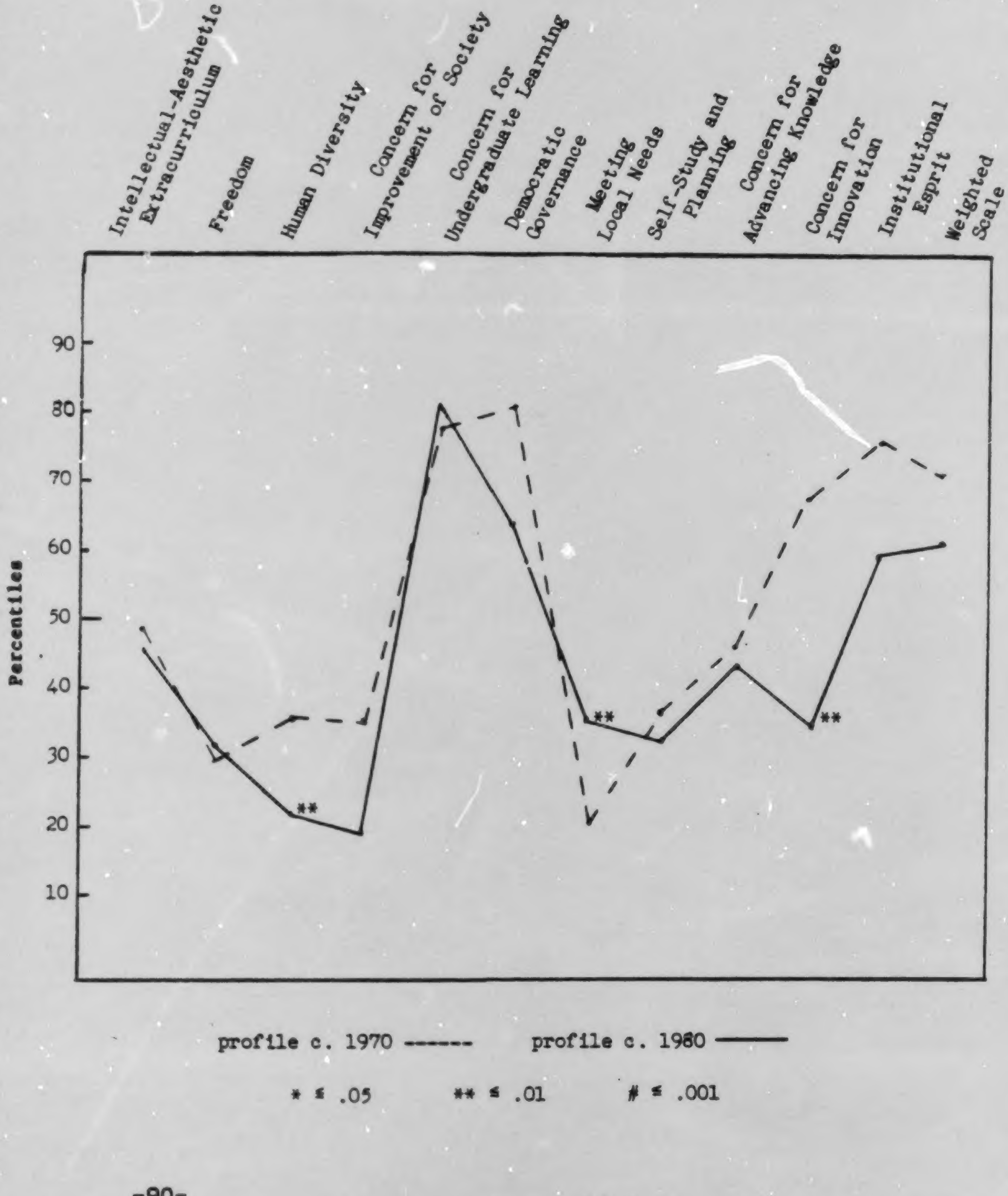


Chart 3-10: Changes on the Institutional Functioning Inventory: Private Liberal Arts Colleges II

N=18

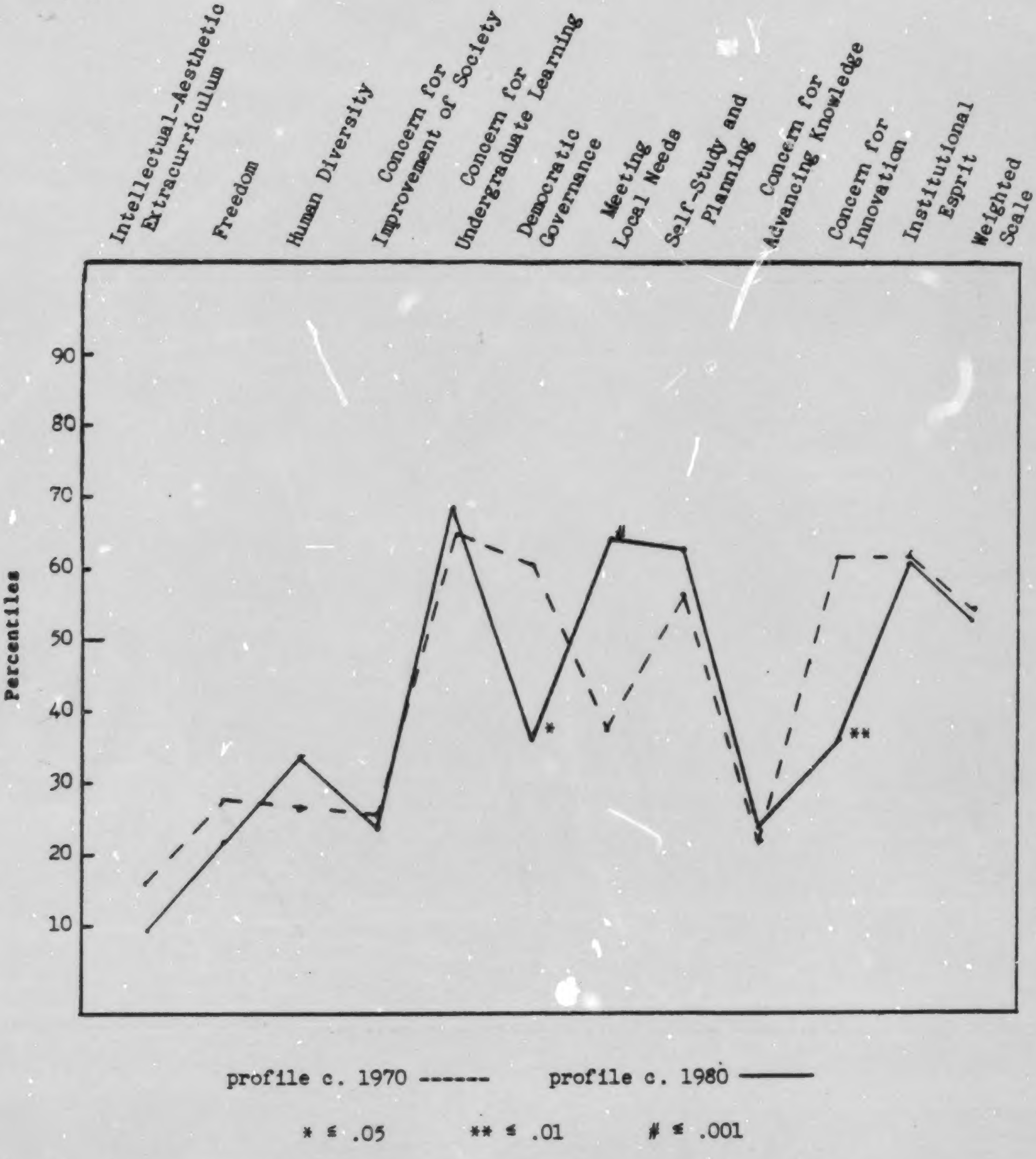
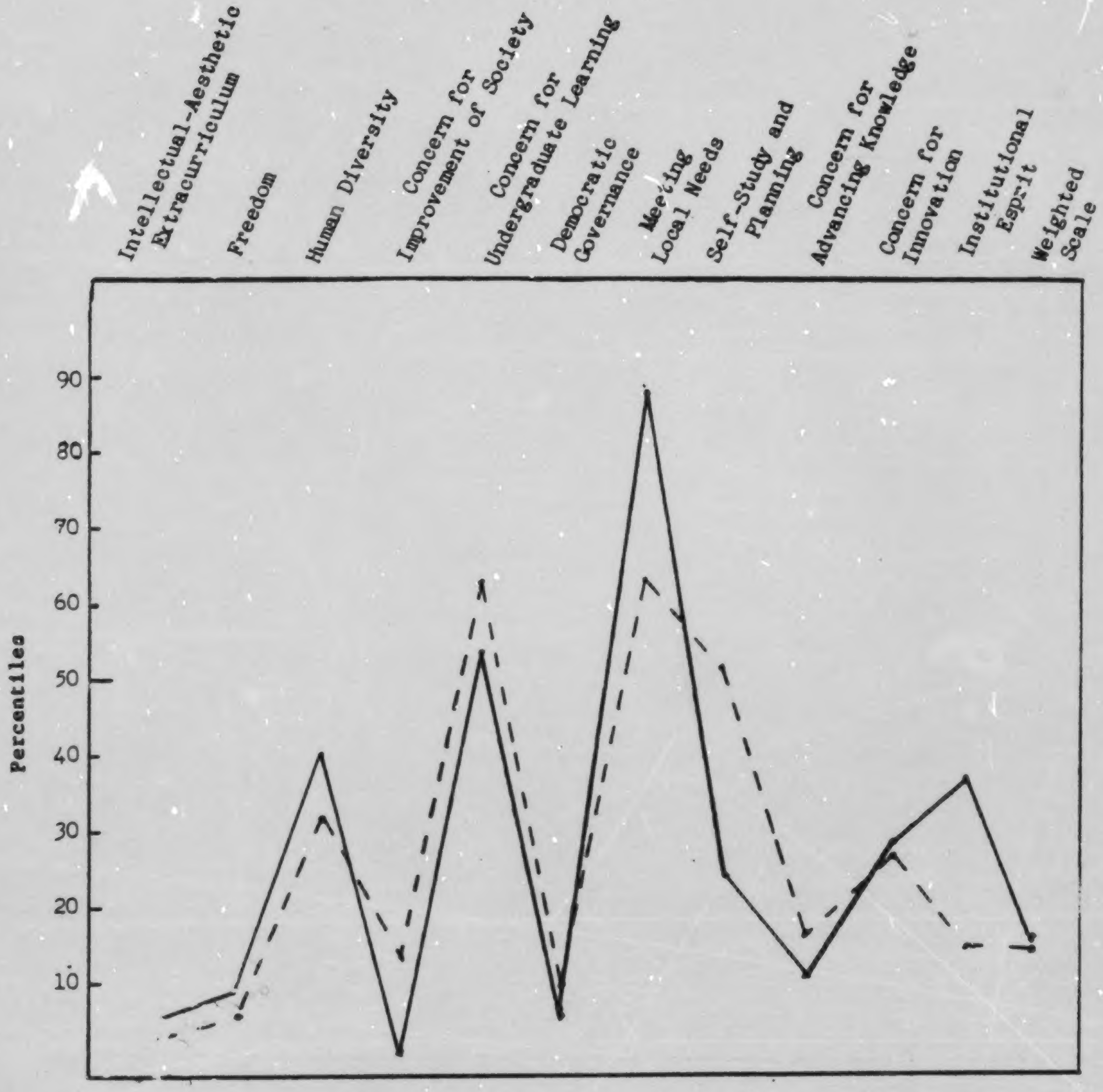


Chart 3-11: Changes on the Institutional Functioning Inventory: Private Two-Year Colleges

N=3



profile c. 1970 ------ profile c. 1980 ———

* ≤ .05 ** ≤ .01 # ≤ .001

Table 3-12: Items Related to Disadvantaged Students at Private Liberal Art I Colleges

		Percent Answering "yes" or "agree/strongly agree"	
Item No.	Item	Early Admin.	Late Admin
2	There are provisions by which some number of educationally disadvantaged students may be admitted to the institution without meeting the normal entrance requirements.	66	55
11	This institution deliberately seeks to admit a student body in which a variety of attitudes and values will be present.	48	44
19	A concerted effort is made to attract students of diverse ethnic and social backgrounds.	52	48
28	This institution tends to attract students from a somewhat restricted range of socioeconomic backgrounds.	77	81
53	Compared with most other colleges, fewer minority groups are represented on this campus.	49	62
119	There are no courses or programs for students with educational deficiencies, i.e., remedial work.	43	22
130	This institution considers its most valuable service to lie in educating the upper 10 percent or so of secondary school graduates.	41	41

are similar for all groups of colleges with only three notable exceptions. First, Concern for Improvement of Society and Institutional Esprit remain constant at Liberal Arts II colleges and both scales fall significantly at all other colleges. The Liberal Arts II category has more religious institutions, which may be an explanatory fact. The steady and relatively high Institutional Esprit score is particularly perplexing considering the financial weakness of these small colleges. Reviewing the items does not clarify the results. Although the faculty express less confidence in their administrators (items 97 and 104), they believe that their colleges are more successful than a decade earlier (72 percent to 77 percent on item 112). Currently 65 percent of the faculty cite morale as high, only 3 percent less than a decade earlier (item 123).

The final puzzle occurs at the Liberal Arts I colleges, which, contrary to the trends at most other independent colleges, register a decline of 13 deciles on the Human Diversity scale. The relevant items are listed on Table 3-12. The numbers are not so dramatic until contrasted with other groups of colleges. Other institutions, for reasons that may be educational or financial, are enrolling considerably more disadvantaged students. The faculty members at the more selective Liberal Arts I colleges see fewer disadvantaged and fewer minority students and more students from a restricted socio-economic range. Yet, there are more remedial programs on campus. Have these colleges reached the point at which they feel additional disadvantaged students cannot be properly accommodated? Are the "missing disadvantaged students" really from lower middle income homes without private or public resources to attend these colleges? Have these colleges pulled back from a commitment to disadvantaged and minority students because they perceive their competitive "niche" to be that of serving primarily the upper middle class? Unfortunately, the data cannot answer these questions.

SUMMARY

Although it is common to refer to the seventies as a tumultuous decade in higher education, faculty perceptions of their campuses have remained relatively stable. The 1980 IFI profile of any type of college in either sector is much more likely to resemble its own 1970 profile rather than the profile of any other group of institutions. Both negative and positive changes, however, have occurred. Professors in 1980 believe that their opinions on college operations are considered less, that innovation is a considerably rarer commodity, and that the entire academic community is less concerned with solving social problems. Faculty have less confidence in administration and generally have lower morale. On the other hand faculty members see a good deal more outreach toward the local community; they notice a student body which is more diverse socio-economically; and they perceive their colleagues paying more attention to the teaching of undergraduate students. In sum, colleges are probably less fun than they were a decade ago. But in certain ways they are more effective.

Most of the public institutions seem to have fared better than those in the private sector. Public research and doctoral and public comprehensive universities have all of the positive features mentioned above with the negative aspects being much less apparent. The negative trends in the public sector are concentrated at locally supported two-year colleges. No dimension of their environment shows any improvement and the instructional staff of these campuses has become especially dispirited and disgruntled during the decade.

CHAPTER FOUR
OTHER FACULTY OPINIONS

The IFI answering and scoring systems have been designed by the Educational Testing Service in such a manner that ten "local option" questions can be added. These questions were developed by the Institute of Higher Education, for the 88 colleges that administered the IFI in the 1980-81 academic year. There are, of course, no comparable questions for the early administration. The number of faculty responding to these special questions is 4,819 or 94 percent of all respondents.

Eight of the questions were designed to trace linkages between finance and faculty work. How have budget changes affected what professors do? One question explores the non-financial rewards of professorial activities. The last question probes faculty members' opinion of their own college's finances.

Ten questions provide very limited room for subtlety or for detailed inquiry. This was partially overcome by expanding (and complicating) the number of possible responses. Within a single question the respondents were asked for both levels and direction of change (high and increasing, high and stable, etc). More problematic was the unavailability of baseline data. No group of faculty had been asked these questions before. When faculty were asked if they could get $500, what percentage of respondents could be reasonably expected to say they could get the money easily? 25 percent? 50 percent? 75 percent?

Although faculty were asked about change over time, not much confidence can be placed on their answers. Faculty are presumably aware that there is a great deal of discussion concerning the "financial crisis" of higher education, and this awareness must affect their response patterns. The data are presented within the context of these limitations.

RESULTS

Table 4-1 lists the ten questions and the percentage response rate for all faculty -- for faculty at public colleges, and for faculty at private colleges. In addition, the data were reviewed by Carnegie Classification when they departed significantly from the general patterns.

Table 4-1: Local Option Questions

Number of Faculty = 4819

Number of Institutions = 89

Question 1. Suppose you wanted to make a minor change in one of your courses requiring about $500 in college (or departmental) funds, and the idea is generally received as good, which would you say is most likely to occur?

	Percent Responding		
	Total	Public	Private
I would get the $500 after proceeding through prescribed administrative channels.	50	41	57
I would be interminably delayed in bureaucratic channels but would get the money.	15	19	12
I would be immediately told that the college cannot afford it.	24	25	23
I would be delayed in bureaucratic channels and not get the money.	11	15	8

Question 2. Suppose you requested about $500 in college (or departmental) funds to assist you in your scholarly work or research, and the pursuit is generally perceived to be valuable. For example, you may need the funds for equipment, travel, or a research assistant. Which would you say is most likely to occur?

	Percent Responding		
	Total	Public	Private
I would get the $500 after proceeding through prescribed administrative channels.	49	41	54
I would be interminably delayed in bureaucratic channels but would get the money.	14	17	12
I would be immediately told that the college cannot afford it.	28	29	27
I would be delayed in bureaucratic channels and not get the money.	9	13	7

Question 3. Suppose you wanted to initiate a community outreach project or some other community service project which required about $500 in college (or departmental) funds. It is generally received as a good idea, but there is no financial payback. Which would you say is most likely to occur?

		Percent Responding	
	Total	Public	Private
I would get the $500 after proceeding through prescribed administrative channels.	25	23	26
I would be interminably delayed in bureaucratic channels but would get the money.	15	16	14
I would be immediately told that the college cannot afford it.	43	44	45
I would be delayed in bureaucratic channels and not get the money.	17	17	15

Question 4. Since 1970, college funds available for instructional innovation, faculty scholarship, and community service activities have:

		Percent Responding	
	Total	Public	Private
Become much more difficult to obtain.	28	37	19
Become somewhat more difficult to obtain.	33	34	32
Remained unchanged.	17	11	22
Become somewhat easier to obtain.	19	12	23
Become much easier to obtain.	3	6	4

Question 5. Faculty require different support services to adequately do their jobs. These services may include typing, duplicating, library resources, data processing, etc. With respect to your responsibilities as a faculty member, please evaluate services at your institution.

		Percent Responding	
	Total	Public	Private
Superior	13	12	14
Superior but declining.	5	8	2
Adequate and improving.	17	11	22
Adequate and stable.	30	25	34
Adequate but declining.	17	27	10
Poor but improving.	5	3	6
Poor and stable.	8	7	9
Poor and declining.	5	7	3

Other Faculty Opinions

Question 6. The non-financial rewards of my job are:

	Percent Responding		
	Total	Public	Private
Very significant and increasing.	10	8	11
Very significant and stable.	18	15	20
Very significant but declining.	9	10	9
Significant and increasing.	10	8	11
Significant and stable.	25	24	28
Significant but declining.	18	22	15
Insignificant but increasing.	1	1	1
Insignificant and stable.	4	5	4
Insignificant and declining.	5	7	3

Question 7. Since 1970, I have:

	Percent Responding		
	Total	Public	Private
Greatly increased my efforts to supplement my income from activities other than teaching and research.	19	18	19
Somewhat increased my efforts.	30	31	28
Neither increased nor decreased my efforts.	47	46	49
Somewhat decreased my efforts.	3	3	3
Greatly decreased my efforts.	1	2	1

Question 8. My outside income comes primarily from:

	Percent Responding		
	Total	Public	Private
A private professional practice (such as psychological, business, legal, medical, or tutorial work).	8	7	9
Consulting	12	13	11
Book royalties or patent income.	3	4	2
Other work directly related to my academic work, e.g., teaching at other institutions or research.	13	10	15
Work not directly related to my academic work.	14	14	13
No significant outside income.	50	52	50

Question 9. Since assuming your present position, how would you describe your efforts to secure another job outside your institution? (Choose one which best applies to you.)

	Percent Responding		
	Total	Public	Private
I have not looked for another position and I would not consider one.	18	16	19
I have not looked for another position but might consider one at another college or university if attractive.	35	34	36
I have not looked for another position but might consider one outside of academe if attractive.	15	17	14
I have explored the possibility of another position(s) at a college or university.	18	18	19
I have explored the possibility of another position(s) outside of academe.	7	8	6
I am actively seeking another position at another college or university.	4	4	4
I am actively seeking another position outside of academe.	3	3	2

Question 10. I consider the financial condition of my college to be:

	Percent Responding		
	Total	Public	Private
Very strong	6	4	9
Reasonably strong.	48	39	54
Somewhat weak.	31	38	26
Very weak.	11	15	9
I do not know.	4	4	2

Can Faculty Get $500?

The first three items ask the faculty members if they could get $500 extra for instructional innovation, for research or scholarship, or for a community service project. Each question noted that the purposes to which the money would go were perceived to be valuable. The question regarding the community service project further stipulated that there was no financial payback. The content of the question was to test the availability of institutional funds for services not for "investment." A community service project may have been viewed by faculty as a potential income generating venture. The amount was set at $500 because this seemed small enough so as not to have significant implications for even the tightest college budget. It is an amount, however, that is too large to expect a faculty member to absorb personally. At all colleges, 65 percent of the faculty responded that they could get the money for course improvement. Half believed they would get the money immediately and 15 percent believed they would get the money only after being "interminably delayed in bureaucratic channels." The faculty at independent colleges generally were more confident about getting the funds. Those at the Liberal Arts I colleges were the most confident about receiving the funds (75%). There was not significant deviation in the response sets of the other college types.

When we asked faculty about getting $500 for scholarship or research, their responses were very similar in pattern to the responses on the previous question. That is, 63 percent thought they would get the money, but 14 percent expected to encounter serious administrative delays. Private colleges, specifically Private Liberal Arts I colleges, appeared the most forthcoming in the eyes of their faculty.

The positive response rate falls significantly with the regard to the community service project. Only 40 percent of the professors believed they could get $500 for such an endeavor. On this item, the public/private response rates are very close. More interesting is that the faculty at public community colleges responded very similarly to all other faculty -- 43 percent believed they could get the money. In spite of the avowed mission of the community colleges, their faculty members were not very confident about receiving $500 for a community service project that did not return the dollars to the college.

In all three of these hypothetical situations, the faculty at public colleges were more likely to note "interminable delay(s) in bureaucratic channels." This is understandable as the administrators of these colleges must comply with state and county budget control devices as well as with internal budgeting procedures.

When asked about trends (Question 4) in receiving funds for "instructional innovation, faculty scholarship, and community service," most respondents (52%) indicated a belief that money has become more difficult to obtain. Only 22 percent indicated a belief that funding is easier, and 17 percent indicated there was no change in available funds.

Support Services

Faculty were asked about the array of support services available to them. Typing, duplicating, library resources, and data processing were specifically listed, as all of these services are important in assisting the faculty as they do their work. Most faculty (64 percent) thought the services to be adequate; 18 percent thought the services poor; and another 18 percent listed them as superior. The trend data are split almost evenly between decline, stability, and improvement of services. Faculty at private colleges reported only slightly better service. However, faculty at community colleges reported the most satisfaction, and faculty at public research universities the least.

Non-Financial Rewards of Faculty Membership

Individuals become professors for many reasons. Presumably salary level is not the most significant source of satisfaction. These "other" rewards may include, among other things, the ability to pursue scholarship independently, the opportunity to work with students, and the freedom to set one's own work schedule. When asked about non-financial rewards, 37 percent thought they were very significant; 53 percent listed them as significant; and 10 percent deemed the non-financial aspect of their employment as insignificant. With regard to change over time, about half (47 percent) saw no change; a fifth of the respondents perceived these benefits to be increasing; and one-third believed they were declining. A simple average of this suggests some modest decline at all colleges.

Private institutions were perceived to provide more of these benefits. Moreover, there was virtually no acknowledged change with respect to these rewards at independently supported colleges. Of all groups of faculty, those at the Liberal Arts I Colleges were most satisfied with regard to the non-financial rewards.

Outside Income

Faculty salaries fell 20 percent in purchasing power during the 1970's. Has this decline influenced the work efforts of faculty? Specifically, are professors devoting more time to outside work? Item 7 of Table 4-1 provides some relevant information on this. Very few faculty members report a decrease in their efforts (4 percent), while 47 percent claim no change. However, 49 percent have increased their efforts, with 19 percent claiming a great increase. The response set is similar for both public and private colleges. Breaking down the data by Carnegie Classification shows no significant differentiation. The reported increase in the search for outside income is as likely to occur at private liberal arts colleges as it is at public research universities. There are no baseline data with which to compare these results. Moreover, it is likely that all faculty in all time periods increase their efforts to obtain outside income as they achieve seniority and outside recognition.

This outside work is not necessarily bad for higher education. Faculty were asked in item 8 to indicate the sources of their outside income. Half claimed no significant outside income. Of the full set of respondents, only 14 percent noted that these efforts were "not directly related" to their academic work. There was no real distinction in the data by sector, but there were differences by Carnegie Classification. As expected, university faculty were far more likely to do consulting and have book royalties and patent income. About 18 percent of the faculty at Liberal Arts II colleges and public community colleges reported that their outside income came primarily from work unrelated to their academic efforts.

Are Faculty Leaving Academe?

Chapter Two shows a drop in professional salaries and Chapter Five reports a decline in faculty morale. Item 9 asks whether, and to what extent, the respondents are looking for new employment. Three-quarters report that either 1) they have not looked and would not accept another position outside of academe or 2) they are looking but would only accept another position at a college or university. Only three percent are actively looking for employment outside of academe. At community colleges, the most dissatisfied of the groups, the figure is 5 percent. There is not, then, according to these reports, wholesale defection of faculty from colleges and universities. But these results are not necessarily comforting, for there are no data for comparison. In addition, we do not know why faculty are so loyal. It may be that they do not perceive any employment options.

There is, perhaps, less reason to worry about losing faculty to other jobs than there is to be concerned about their apparent immobility. Over half report no exploratory activities with regard to other employment. Only 7 percent are actively seeking other jobs. Of these, most are looking within higher education. Yet all indicators are that higher education should be preparing for contraction.

Perceptions of College Financial Conditions

The participating faculty members were asked about their perceptions of their own college's financial condition. Few (6 percent) considered their college to be very strong. Some thought their college to be very weak (11 percent). Almost half (48 percent) listed their college as reasonably strong and about a third (31 percent) responded "somewhat weak." Interestingly, faculty at independent colleges thought their institutions to be better off financially. There were no real distinctions in the responses by Carnegie Classification--suggesting that faculty assume normative perceptions about financial health of their own institution. A regional liberal arts college may be perceived as strong because it is doing better than a few years ago. Faculty perceptions apparently, and understandably, are not influenced very much by their college's relative financial standing with respect to a wide sample of colleges.

SUMMARY

The ten questions reviewed in this chapter reveal a good deal of useful information about college faculty members and the perceptions they hold about their institutions. Somewhat more than a third consider their college to be weak financially. About the same percentage report that they would have difficulty in obtaining $500 for instructional or scholarly purposes. However, 60 percent believe that they could *not* get this money for a worthy, but not "profitable" community service project. This proportion held for faculty at all institutions including public community colleges. Half report that funds for three areas are becoming more difficult to obtain. On the positive side, four-fifths of the faculty believe support services are adequate or better, and these services are not, according to these respondents, declining. Ninety percent list the non-financial rewards as significant or better although these professors cite some slight diminution in this regard.

Faculty salaries have been declining over the decade. There is evidence that faculty may have responded by increasing efforts to earn outside income. The data, however, may be misleading and longitudinal reports are required to confirm this conclusion. What is certain, however, is that professors are not defecting from academe in considerable numbers. In fact, the responses suggest that lack of mobility, and not its existence, may be the real problem.

CHAPTER FIVE
RELATING CHANGING FINANCES TO FACULTY PERCEPTIONS

The rapidly increasing interest in the measurement of college and university financial health springs from the assumption that declines in the level of resources available to these institutions adversely affect their ability to deliver educational services. This chapter tests that assumption. Two modes of analysis were used. First, the colleges in the sample were arranged in groups according to the measured changes in their financial condition. Changes in the IFI scores of the groups were then compared. The results of this type of analysis are easy to display, but the method does not control for other intervening factors. Multivariate analytic techniques were used in the second stage. Several models were tried including one specific multivariate model developed by Collier and Patrick of the National Center for Higher Education Management Systems(NCHEMS).

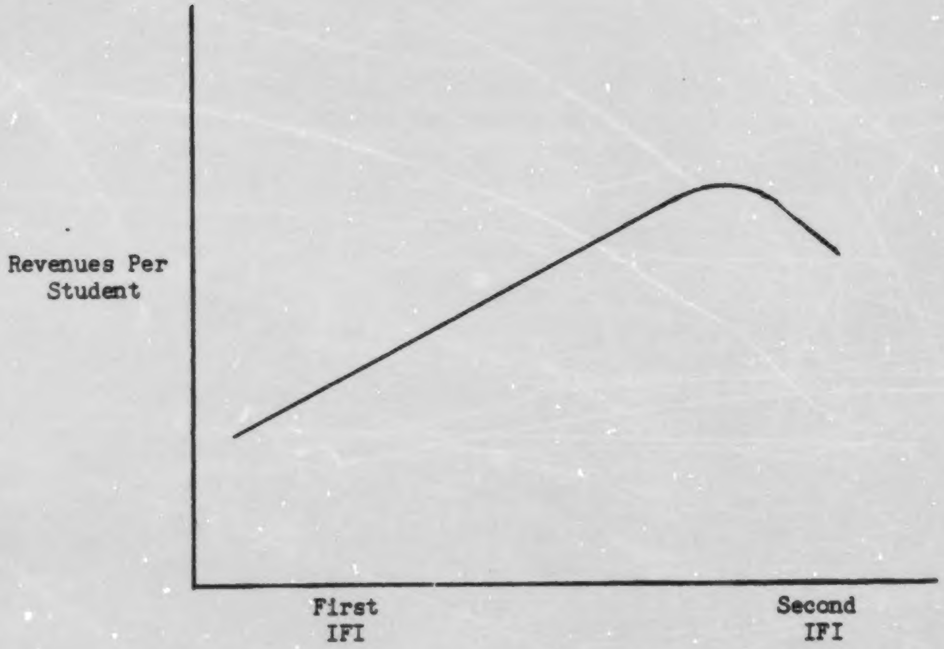
There are numerous methodological and data problems that complicated these analyses. Few authors, Collier and Patrick excepted, define a combined single measure of financial health. Most list a number of useful measures. In many cases, however, it is not clear whether a college administrator would wish his/her college to be higher or lower on the measure. Revenues per student is an interesting case. A financially healthy college may enjoy rising revenues per student. On the other hand, a struggling college may show rising income per student as enrollment declines. The trends on the IFI also deserve some discussion. Change on the IFI over the decade may be a misleading statistic. For example, Chart 5-1 shows revenues per student at a hypothetical college.

The first IFI is given in 1971 and the second in 1980. Income per student would be shown as markedly higher in 1980 than in 1971, but 1971 is in the middle of a period of financial improvement, and the year 1980 is in a period of financial decline. These short-term trends may have more impact on faculty perceptions than the absolute level of financing. As for the dependent variables, they, too, may be looked at in several ways. The first consideration is whether to predict to the absolute levels of the IFI or to changes in the IFI. A more important consideration, perhaps, is which IFI scales should be used. Generally, the "weighted score" is used in these analyses. But because Concern for Undergraduate Learning and Institutional Esprit are especially significant scales, we used them as well. In short, there are so many configurations for analysis that not all could be considered nor reported. The reader should bear in mind that the reported results represent

Chart 5-1: Revenues Per Student at Hypothetical College

CHART 5-1

REVENUES PER STUDENT
AT HYPOTHETICAL COLLEGE



only some of the relationships that we examined. We reported the data that we did because they are typical of the results of all analyses -- analyses that generally yielded no clear relationships.

IFI RESULTS BY FINANCIAL GROUPINGS

Private Colleges

The Peat, Marwick, and Mitchell method of analysis is reviewed in Chapter Two. In their publication, Peat, Marwick, and Mitchell provide decile ranking for all private colleges for each of the ratios and for levels of surplus and deficit.[31] For example, a college with a deficit of 1.7 percent of revenues ranked in the bottom 20 percent of all institutions. A college with an 8 percent surplus would be in the top 10 percent. By using changes in the decile ranking on the four balance sheet ratios and on the total current fund surplus ratio over the decade, we created an aggregate financial change index. Our method is best illustrated by the example on Table 5-1. If a college ranking in the third decile of financial viability in 1971 improved this ratio to rank in the sixth decile, it would have a change of +3. Making similar calculations for all five ratios would yield a summary index of financial changes for this hypothetical college of +6. We were then able to use this aggregate measure to rank private colleges on changes in financial condition. We divided the forty-seven private colleges into four groups: the lowest quartile had change indices from -9 to -1, the second from 0 to 3, the third from 4 to 7, and the fourth from 8 to 17. The colleges in lowest quartiles showed financial decline or virtually no change on the Peat, Marwick, and Mitchell indicators, while the colleges in the upper quartile exhibited growing financial strength.

Using analysis of variance we compared the average IFI scores of the four quartiles and changes on the IFI scores. There were no statistically significant results, nor were the results for most scales even uni-directional. On the Intellectual-Aesthetic Extracurriculum scale, for example, the average scores of the colleges in the highest and lowest quartiles declined while the average scores for the middle quartiles rose.

Another way to display the results is to specifically compare the IFI scores of colleges in the highest and lowest financial change quartiles. This has the advantage of eliminating the middle group of institutions for which minor measurement problems can overwhelm the "real" trends. Charts 5-2 and 5-3 show the average IFI profiles for these two groups.

---

[31] Peat, Marwick, Mitchell, and Company, *Ratio Analysis in Higher Education* (New York: Peat, Marwick, Mitchell, and Company, 1980) pp 74-75.

Table 5-1: Example of Financial Change Index

	1971 Decile Rank	1980 Decile Rank	Change
Financial Viability	3	6	+3
Plant Equity to Plant Debt	5	4	-1
Expendable Fund Balances to Total Expenditures	7	7	0
Capital Fund Balances to Total Expenditures	5	8	+2
Current Fund Surplus to Current Fund Revenues	4	6	+2
			==========
Total Decile Change			+6

The resultant patterns are similar, with both groups showing significant increases on the Meeting Local Needs scale and both showing large declines on the Concern for Innovation scale. The only statistically important deviation in patterns is the significant increase on the Concern for Undergraduate Learning scale for colleges with financial improvement. However, the analysis of all four quartiles does not support the proposition that colleges with improving finances pay more attention to undergraduate students. Institutions in the second (or the next to lowest) quartile show greater average gains on this scale than do institutions in the highest quartile (shown on Chart 5-2). The third quartile shows the greatest increase. When the size of the sample and standard deviations are considered, the differences between the groups are statistically insignificant.

The best colleges have small but statistically insignificant increases on the Institutional Esprit and on the Weighted Scales. The opposite is true for the financially weak private colleges.

Public Colleges

We did not use the Peat, Marwick, and Mitchell analytical structure to categorize the public institutions, our reason being that capital structure analysis is relatively unimportant for public colleges. The financial well being of public colleges is more dependent on the fiscal fitness of the state or municipalities that support them and on the standing of these colleges with the electorate and politicians. The debt of many public institutions is held by the state and the level of that debt may have very little if any effect on college operations.

We chose three measures to categorize public colleges and universities. One was change in surplus or deficit -- the same component used in

Chart 5-2: Changes on the Institutional Functioning Inventory: Private Institutions with the Best Financial Trend

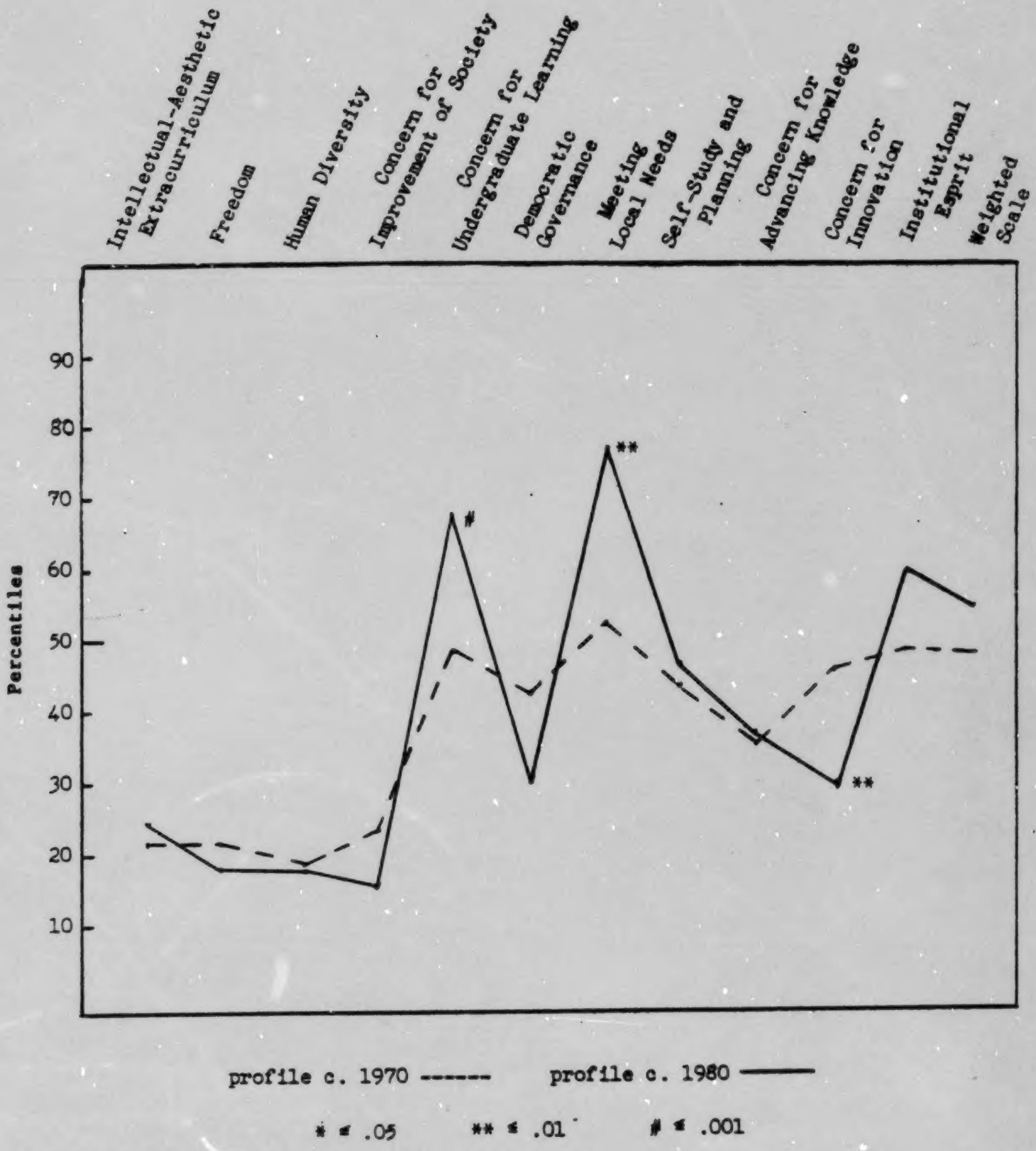
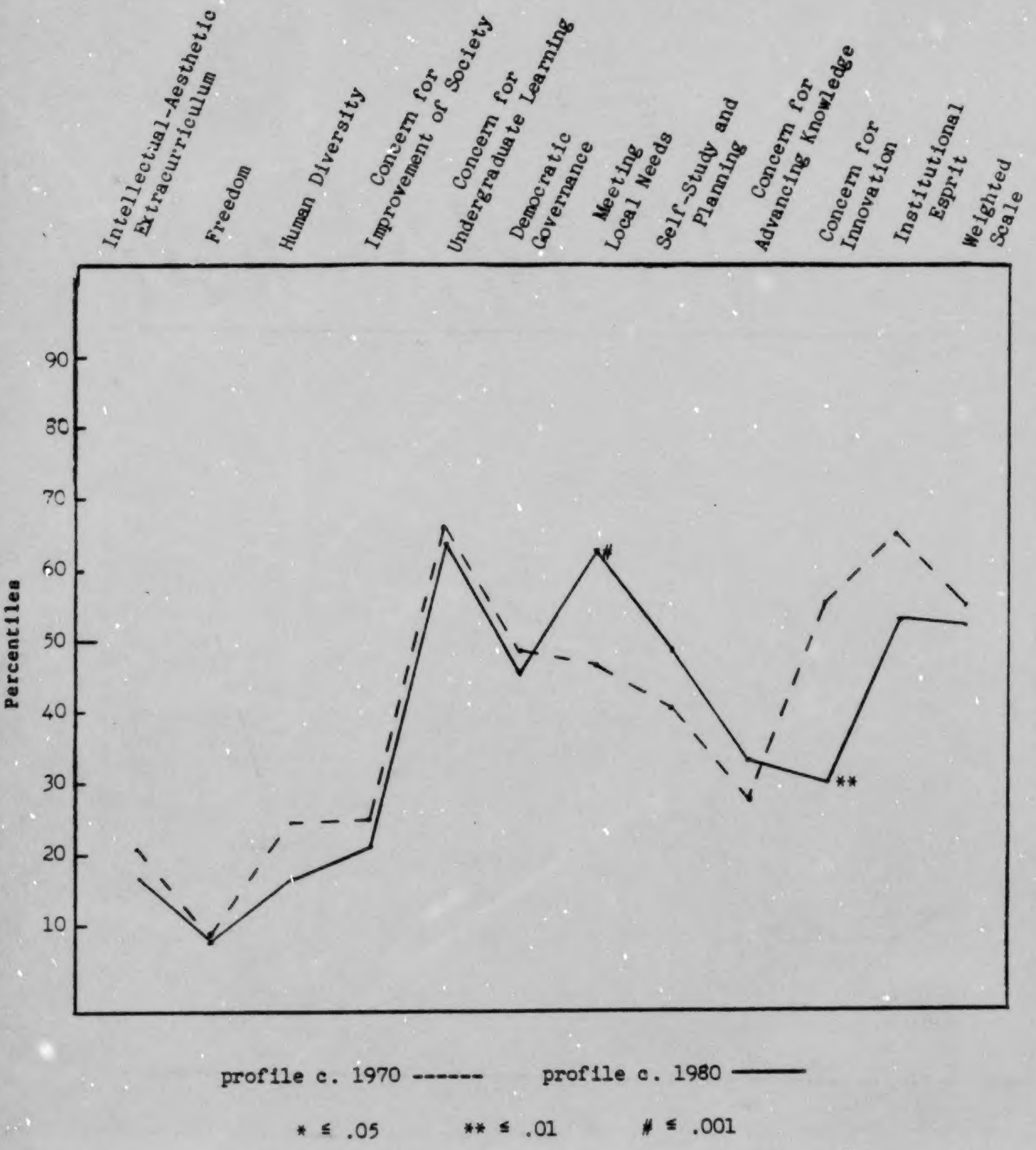


Chart 5-3: Changes on the Institutional Functioning Inventory: Private Institutions with the Worst Financial Trend



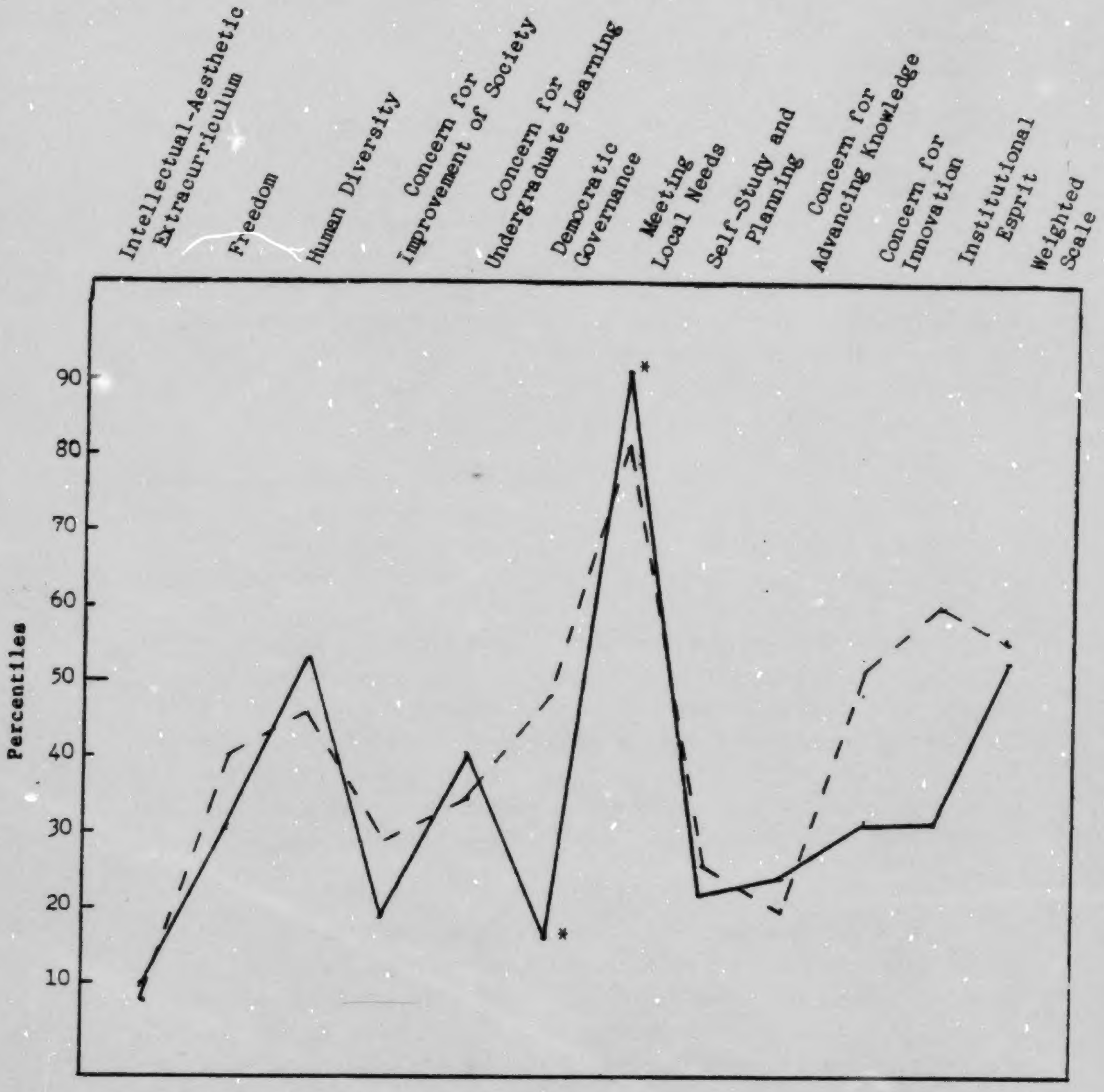
the private college analysis. The second component was changes in educational and general income per student. The third was changes in full-time equivalent students, for we recognized that colleges with declining enrollments and declining income can have increases in income per student. We ranked all colleges by deciles on these measures for both years. The sum of each institution's change in the rankings was the overall index, and this overall index was used to place the colleges in quartiles. Colleges in the lowest quartile had ratings of -9 to -2. All those in the second quartile had a -1 rating. Those in the third varied from 0 to +2. The highest quartile had aggregate financial change ratings of +3 to +8.

The analysis of variance for all four quartiles of public institutions was only slightly more productive than it was for private institutions. Analysis of changes on the Democratic Governance scale showed statistically significant results.(σ = .05) Changes in democratic governance were inversely related to changes in finance. That is, it was more likely that there were measured decreases in the sharing of authority at colleges with the most improved financial position. No other scales showed statistically significant patterns. In the analysis of private colleges this relationship did not hold up. The independent colleges in the highest quartile, however, did decline on this scale while those in the lowest quartile did not.

The average IFI profiles for the public colleges with the worst financial trends are shown on Chart 5-5. The increases on the Freedom, Human Diversity, and Meeting Local Needs scales are all statistically significant. The weighted IFI score gain is also significant. In contrast, the colleges with the most financial improvement show only a significant gain on the Meeting Local Needs scale. The average Democratic Governance score declined significantly. The results clearly do not sustain the hypothesis that improving financial conditions can be linked to a better educational environment. In fact, the data for these two groups of public colleges imply that the opposite may be true. Faculty at the colleges with worsening finances--as measured by declines in current fund surpluses, in educational and general income per student, and in enrollment--rate their colleges better at the end of the decade.

The inverse relationship between finance and functioning is not supported by the analysis of all four groups of colleges and should not be given much credence. The analysis of the full sample of public colleges does suggest, however, that declines on the Democratic Governance scale may be related to improved finances. It may be that financially effective administrators have been zealous in their attempts to increase enrollment and reduce deficits. In the process they may have relied somewhat less on a collegial process for governance. However, twenty-four analysis of variance tests were made for the public and private institutions; it is not surprising, therefore, that one should have achieved .05 significance.

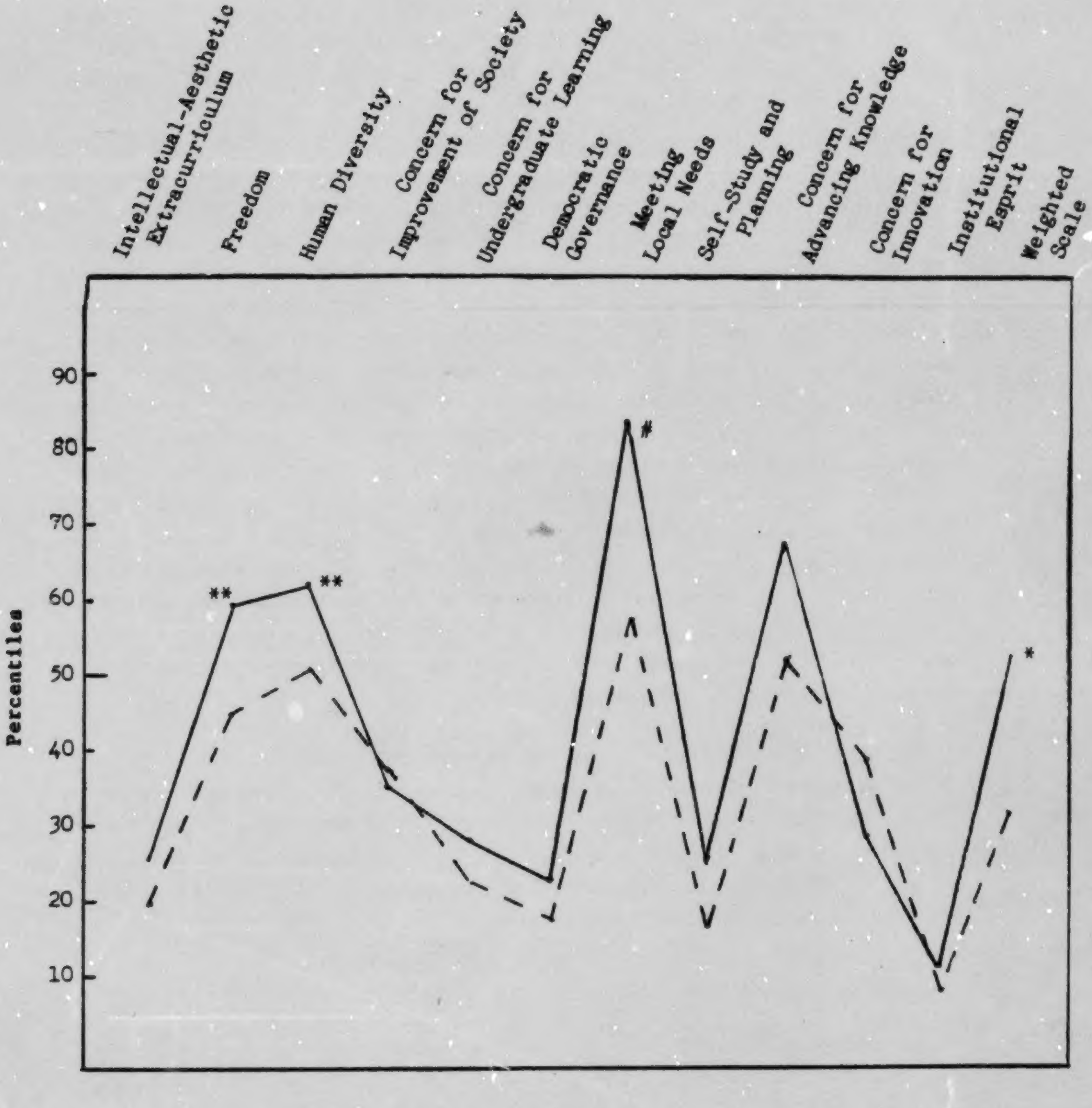
Chart 5-4: Changes on the Institutional Functioning Inventory: Public Institutions with the Best Financial Trends



profile c. 1970 ------ profile c. 1980 ———

* ≤ .05 ** ≤ .01 # ≤ .001

Chart 5-5: Changes on the Institutional Functioning Inventory: Public Institutions with the Worst Financial Trend



profile c. 1970 ------ profile c. 1980 ———

* ≤ .05 ** ≤ .01 # ≤ .001

MULTIVARIATE ANALYSES

The NCHEMS Model

Multiple regression facilitates the simultaneous examination of the effects of several independent variables. Collier and Patrick used discriminant analysis (a variant of multiple regression) to classify institutions as having a "decidedly" strong or weak financial condition.[32] The dependent variable, financial condition, was determined by a panel of experts, whose statistical task was to see if, using objective financial data, they could mathematically replicate the opinions of the experts. They used 1976-77 data to predict the financial condition in 1979-80, and they were successful for private institutions, predicting conditions in 40 percent of the cases. They were unsuccessful, however, for public institutions. The discriminant analysis yielded five variables. One was the ratio of interest expenditures to total expenditures. This variable was a measure of financial risk--similar to the "financial viability" measure in the Peat, Marwick, and Mitchell schema. The second variable was a ratio of unrestricted to restricted revenues. The third, a measure of "reserve strength," was taken from the change in total fund balances. The fourth variable was an index of the "dispersion" of institutional income. Presumably, colleges with less dependence on one source of income would be less exposed to financial risk. The measure the experts used was percent of income coming from the largest source, and at private colleges that source almost always would be tuition. The final variable attempts to gauge financial flexibility and is a ratio of fixed expenditures to total expenditures. Fixed expenditures are defined as the salaries of tenured faculty members plus maintenance and operating expenditures. (In this analysis tenured salary expenditures were estimated from data collected on the percent of faculty with tenure.)

These five variables were the independent variables used to predict three dependent variables in separate equations. The dependent variables were changes in the weighted IFI score, change in the Concern for Undergraduate Learning scale, and change on the Institutional Esprit scale. No equations nor variables were statistically significant, whether private colleges alone or all colleges were in the sample.

---

[32] Douglas J. Collier and Cathleen Patrick, *A Multivariate Approach to the Analysis of Institutional Financial Condition.* (Boulder, Colorado: National Center for Higher Education Management Systems, 1978).

Testing Other Models

As mentioned earlier in this chapter, the possible permutations of analysis are limitless. Only a few models were tested -- and fewer still reported.

The Variables Four dependent variables were used. The first, changes in the IFI weighted score, is an overall measure of college improvement, using the current college president's perceptions of the scale's importance as the weighting factor. Changes on the Weighted Scale were used for most analyses. The Institutional Esprit scale was also taken as a dependent variable as many of the items on the scale ask faculty about administrative and college effectiveness. Changes in Concern for Undergraduate Learning was used as a third measure of college success because for most colleges the education of undergraduate students is a primary task. A relatively small number of the ninety-three institutions scored high on the Concern for Advancing Knowledge scale, and it was, therefore, not selected for special analysis. The fourth scale chosen as a dependent variable was Democratic Governance. The purpose of this selection was to test the tentative findings in the previous section-- that declines in perceptions of democratic governance at public institutions are linked with improving finances. There are five primary independent variables. The first was membership in the public or private sector, a "dummy" variable used to control for the special effects that may pertain to the different sectors. Changes in enrollment, another independent variable, was used as both a predictor and a control variable. It is a good measure of institutional growth and is closely related to total income. Changes in educational and general income was also used as predictor variable. However, changes in enrollment was "forced" into the equation early. After this institutional growth measure was tested, income changes were tested, and in this way, both growth and resources per student got tested. Changes in average faculty salaries was the fourth primary independent variable. The financial analysis showed that keeping faculty salary increases below the inflation rate was a common method for balancing institutional budgets. Changes in entering freshman SAT scores was another variable used in all equations. Although it is not necessarily a relevant factor for two-year colleges, the quality of students is an important factor for most four-year institutions--especially private colleges that attempt to maintain an image of selectivity.

Other variables were tried under certain circumstances. In one equation, the dependent variable was the 1980-81 weighted IFI score, and the early IFI score was used as a control variable. When trying to predict changes on the Concern for Undergraduate Learning scale, three extra variables were added. One was a measure of changes in faculty workload; another was a measure of change in institutional expenditures per student, and the third was a "dummy" variable controlling for degree level--two-year or four-year. Prior analyses revealed that public two-year colleges declined on Concern for Undergraduate Learning. Because these two-year colleges also grew very rapidly, it may appear that growth was negatively related to changes on the IFI scale when, in fact, the IFI changes have something to do with being a locally funded lower division institution. Using this last control variable could help to unravel the knot.

The Results The results of the first regression attempted will be described in some detail. The dearth of meaningful results is typical of most of the multivariate analyses attempted. How the other equations differed in approach will be reviewed, and only significant results will be discussed.

Table 5-2: Regression of the Weighted IFI Change Score Against Financial and Other Variables

		Entered at			Level of
Variable	Stage	Beta	F	Significance	Implication
SECTOR	1	-.25	4.1	.001	Public colleges performed better.
FTE.CHG	2	-.05	0.1	N.S.	---
SAL.CHG	3	-.07	0.3	N.S.	---
SAT.CHG	3	-.03	0.1	N.S	---
INC.CHG	3	0.0	0.0	N.S.	---

R = 7%

DEFINITIONS

Dependent Variable: change on weighted scale score.
Independent Variables:

SECTOR - 1 = public
2 = private

FTE.CHG - Percent change in FTE enrollment from 1971 to 1980

SAL.CHG - Percent change in average faculty salary from 1971 to 1980.

SAT.CHG - Percent change in average freshman SAT scores from 1971 to 1980.

INC.CHG - Percent change in educational and general income from 1971 to 1980.

The data of the first regression are shown on Table 5-2. The results are minimal. The dependent variable is change on the Weighted Scale. Only "sector" was a significant predictor variable: colleges in the public sector did better on this overall measure than those in the private sector. The other variables are all insignificant. In fact, contrary to expectations, increases on three of the variables (enrollment change, salary change, and SAT score changes) are negatively related to changes on the IFI. In an equation with a slightly different form, the regression predicts the new weighted score using the old weighted score as a control variable. The results are almost identical; again only sector is significant.

In the equation using Institutional Esprit as the dependent variable, no variables are significant. However, when trying to predict the changes on the Concern for Undergraduate Learning scale the equation changes in several ways. Sector drops out as a significant variable (being a member of the private sector predicts high absolute levels on the scale but not changes). Changes in enrollment is the most significant variable and is negatively related to changes on the scale. Changes in faculty workload is also negatively, and significantly, related to changes on the Concern for Undergraduate Learning scale. Changes in student SAT scores is positively correlated. Other variables, including changes in institutional expenditures per student, show no significant relationship. When a two-year control variable is added, negative relationship emerges. That is, two-year colleges do worse on this measure of instructional commitment. Moreover, the inclusion of the two-year college variable increases the measured effects of the other variables. The signs on the other variables do not change but the levels of significance increase. The implication is that increases in enrollment and workload have significant negative effects on the instruction of undergraduates.

Changes in income or in enrollment do not predict changes on the democratic governance scale. Thus, the hypothesis offered in the earlier analysis is not supported with regression analysis.

SUMMARY

The financial data were not very effective in predicting or in explaining changes on the IFI. Although there is some slight evidence that private colleges with improved finances function slightly better, the opposite seems to hold for public institutions. The multivariate analyses, which can digest several variables simultaneously, do not support the group analyses. In fact, the only regression with real significance shows changes on the Concern for Undergraduate Learning scale to be negatively related to enrollment growth and to increased faculty workloads. Overall, the results suggest that the linkage between fiscal resources and college functioning is very weak indeed. The campus visits shed some light on this lack of connection.

CHAPTER SIX
THE CAMPUS VISITS

The analysis of the relationship between finance and faculty perceptions of institutional operations takes two forms. One is statistical in nature. The other is qualitative. By visiting selected colleges across the country, we achieved a contextual understanding of the relationship. The statistical analyses show very little direct linkage between the changes on the financial measures and changes in faculty perceptions. One possibility for this is that the financial measures, or the IFI, or possibly both are inadequate for the analytic task. That is, despite the evidence of validity discussed in Chapter One, the variables used may not be gauging actual financial and operational changes that are occurring on the campuses. The campus visits, therefore, were used to verify the measures and to identify other significant non-financial variables in the operating equation.

Most of the thirteen colleges that were visited were selected because they did not fit the preconceived mold. For example, some were financially well-off, but the changing faculty responses showed evidence of educational problems. Others seemed to be slipping economically, but the faculty evaluated their college more positively than they did ten years earlier. In addition, a few colleges were selected because they provided interesting contrasts. For instance, two community colleges in the same state were visited. All of these college visits and the ensuing interviews were undertaken to achieve the three goals discussed above -- a contextual understanding of the finance/functioning relationship, a further verification of the measures, and the discovery of other important variables.

Six of the thirteen college visits are presented in detail. These six were chosen because they illustrate some particular issue very clearly. Conclusions from these visits are summarized in the final chapter using the six cases presented in this chapter as well as the other seven not reviewed in detail.

SIX INSTITUTIONS

Three of the six cases reported are public community colleges. The first is one of four two-year colleges in a municipal system in the Midwest. There was a minor budget "crisis" and a strong assertive reaction by the system administration. The other two community colleges sit at opposite ends of the same northeastern state. To the extent that the same state treasury, using the same formula, provides almost 40 percent of the operating budget of each institution, their financial situations are similar. The faculty perceptions of campus climate, however, differ considerably. Two private liberal arts colleges are also reviewed as is a medium-sized public university.

Muni Two-Year

Muni Two-Year is one of four community colleges in a municipal system in the Midwest. The city, like many other midwestern industrial centers, has an economically weak urban center with a large disadvantaged population. Economic growth, to the extent that it exists at all, is occurring in the outlying areas of the municipality. Muni Two-Year is situated in the more suburban southern perimeter of the municipality. High technology and defense industries are in close proximity.

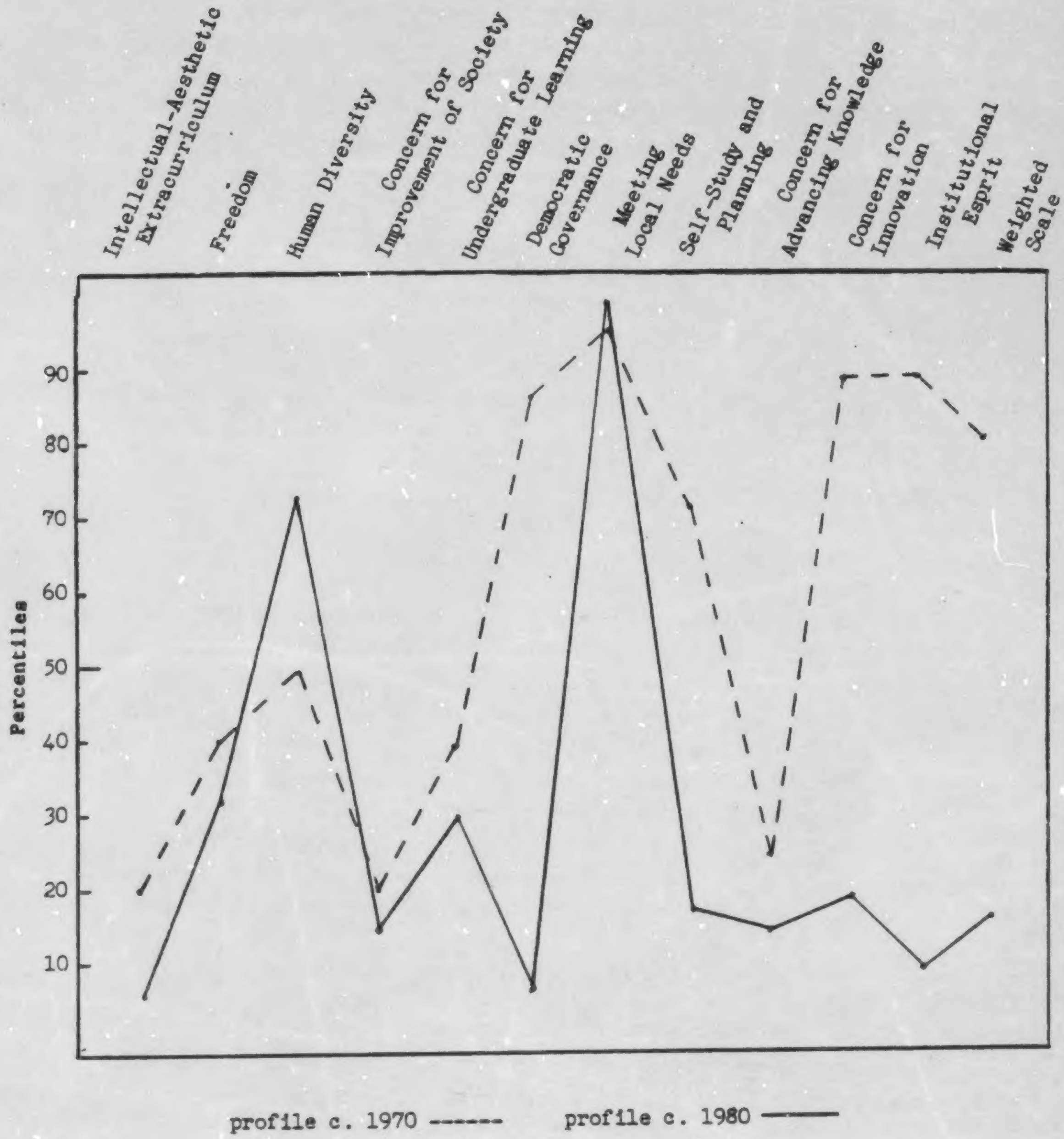
The college system was set up about twenty years ago, and the first chancellor is still recalled with a special reverence. One administrator summed up this chancellor's approacn to management in this way: [He provided] "policies and guidance but allowed the campuses a fair amount of autonomy." Of course these were the "golden years," and the primary emphasis was on directing growth--not an inherently unpleasant task.

In 1968 the campus enrolled 3000 FTE students with an education and general budget of about $2500 for each student. (Again in this chapter, all financial figures, unless otherwise noted, are in constant 1980 dollars.) Transfer programs were the academic mainstay. Since that year, enrollments peaked at 5200 students in 1977. In 1978 enrollment fell to just above 4800, and occupational programs accounted for a much larger proportion of enrollment. Local appropriations were $3 million in 1968. In the 1970-74 period, municipal funds hovered around $4 million then fell back to about the $3.2 million level for the rest of the decade. State appropriations, on the other hand, increased steadily from $2 million to $5.5 million. State support per student increased 71 percent, starting at $680 and rising to $1160. In effect, then, the growing state support has more than offset the decline in local appropriations. Total education and general income of the college has remained within $13.5 to $14 million between 1974 and 1980, having risen from $7.6 million in 1968. Educational and general income per student fell in 1977 as enrollment peaked and rose again in 1980 to within 7 percent of the 1974 record level of income per student.

In spite of the recent weakening in enrollment, the college has enjoyed a good deal of financial stability. Earlier data are not available but the figures since 1974 show that the average salaries at Muni Two-Year have gained in purchasing power, a trend that runs counter to almost every other institution in the study.

The dotted line on Chart 6-1 shows the profile in 1968. The high

Chart 6-1: Changes on the Institutional Functioning Inventory:
Muni Two-Year College



scores on Democratic Governance, on Self-Study and Planning, and on Concern for Innovation indicate that faculty perceived authority to be widely shared, decision making to be rational and based on planning, and new ideas to be easily accepted. Institutional Esprit (measuring morale, confidence in the administration, and general institutional success) stood at the 90th percentile. Meeting Local Needs was near the top of the scale. The overall weighted score was at the 80th percentile. Shortly after this "snapshot" of institutional climate was taken, the founding chancellor resigned and a new chancellor was appointed. Recollections about this individual are a little hazy, but several faculty and administrators described him as ineffectual -- "he failed to keep the system under control." In the late 1970's the system's board of trustees brought in a new chancellor, with strength in management systems and control. The new chancellor's mission was to put order back into the system, which he tried to accomplish by centralizing decision-making. For example, to control the proliferation of courses and programs in the system, the chancellor's staff required all new course and program proposals to be routed through each of the other three campuses before final approval at the central office. Recognizing the end of the growth period for higher education and concerned about the previous record of almost automatic promotion and tenure, the staff instituted a procedure for reviewing faculty performance, which relied exclusively on "observable behaviors." In addition, some board members believed the faculty were not working hard enough, and the new chancellor, in response, instituted work rules that required every member of the faculty to teach (be in class) fifteen hours weekly and to hold office hours for an additional ten hours each week.

The administration initiated these and other changes because it wished to make the entire system more efficient and to eliminate abuses. College officials (as contrasted to system officials) and the faculty viewed these changes quite differently. They did not perceive the system to be in financial trouble, and the changes were made, in their opinion, because the chancellor did not trust them and/or wanted more power. They complained bitterly of the increased bureaucracy. "It takes twenty hours of work to prove that a professor is average," complained one department chairman. Of greater concern to these "first-line managers" was their inability to change their programs and courses. One fumed that "sixteen pieces of paper were required to hire a part-time instructor." Another reported that although only one new course was needed, the creation of a technical writers program was delayed two and a half years because of the bureaucracy.

Many of the college faculty, believing that they were being treated as irresponsible workers rather than as professionals, subverted the new work rules. Professors who had worked forty or more hours per week reduced their hours to twenty-five in "accordance" with the chancellor's directive. The 1980 IFI profile (solid line on Chart 6-1) illustrates effects of this interference on the campus. The Meeting Local Needs scale remained essentially unchanged at the top of the scale. Human Diversity rose from the 50th percentile to the 73rd. All other scale scores fell. Big drops occurred in Democratic Governance, Self-Study and Planning, Concern for Innovation, and Institutional Esprit. Each of these four scores were close to the top of the scale in the late 1960's and fell to near the bottom. When responding to the Democratic Governance scale, the faculty indicate that the students' voice in decision making has not diminished greatly. When asked about their own opportunity for involvement, the faculty are unequivocal. In 1980 only 20 percent of the faculty agree with the statement: "A concept of 'shared authority' (by which the faculty and administration arrive at decisions jointly) describes fairly well the system of governance on this campus." In 1968, in contrast, three-quarters had perceived "shared authority." The estrangement in governance carries over into the area of planning. Three quarters of the faculty report the existence of a "long-range plan" in 1980 as compared with less than 50 percent in 1968. But while faculty know of the plan, fewer believe that it is "based on a reasonably clear statement of goals" (87 percent to 69 percent). About half as many faculty believe that institutional philosophy, purposes, and objectives are being examined in the process. Three-quarters of these professors report that the curriculum changes are now made for financial reason whereras twelve years prior only 29 percent believed this to be true. All of these differences are finally reflected on the Institutional Esprit scale. Whereas 54 percent believed top-level administrators provided effective leadership in 1968, only 38 percent agree in 1980. Conversely, 13 percent thought communication between administrators and faculty to be poor in 1968 compared with 68 percent in 1980. Although 72 percent still believe the college to be successful in achieving its goals in 1980, 94 percent thought the college to be successful in 1968. Finally, 90 percent perceived high faculty morale in 1968. Only 38 percent concurred in 1980.

In summary, enrollments grew rapidly from 1968 to 1977 and then dropped a little. Education and general revenues rose from $7.6 million to just under $14 million. In spite of the enrollment decline, education and general revenues rose $2.7 million in the last three years as state money replaced local funding. As a result, expenditures per student rose rapidly during this recent period, and faculty salaries also increased in purchasing power. Yet the faculty perceive the institution to be considerably less attractive and less effective. Officials at Muni Two-Year regretfully agree with our measurement of faculty perceptions. The system chancellor may have saved some money but the "price" was very dear.

Suburban Two-Year

Suburban Two-Year is located near a large Eastern metropolis. It is supported by the county and the state. Although the state economy has been weak, the county has been growing. Enrollment grew rapidly at the college from 2300 FTE students in 1968 to 5200 in 1977, but by 1980 the total slipped to 5000. Education and general appropriations show a parallel pattern, peaking at $16.3 million in 1977 before falling to $14.4 million. The state assumed a larger share of the budget (36 percent) in 1980, whereas in 1968 its share was only 29 percent. Conversely, the local contribution fell from 25 to 21 percent. In 1971, the year before the first IFI was administered, education and general income per student stood at $2700, down from $3000 three years earlier. By 1980, income per student was $2900, having declined from $3150 in 1977.

Total expenditures followed the total income pattern although there were some deficits in the middle of the decade. The average faculty salary peaked at about the same time the deficit occurred, reaching $30,000. By 1980, salaries fell to $22,500. In spite of the decline of salaries in constant dollars, instruction and departmental research increased from 45 percent of education and general expenditures in 1968 to 57 percent in 1980. Precise administrative expenditures are not available from the early HEGIS data. However, campus reports show that the percent of the total budget devoted to administration declined substantially. The interviewees explain that this is the ironic result of more rather than less administrative control. The campus is run almost in every detail by the president. Officials reporting to him complained that only the president's ideas are implemented. "The way to get something done is to make the president think it is his idea." Many administrative positions are left unfilled with the president's office assuming the related responsibilities. The vice-president for administration comments that when the president does hire, he tends "to surround himself with 'yes-men' who agree with him in meetings and then complain behind his back."

The department chairpeople also voice the opinion that they can get nothing moving without the specific approval of the president. One department head, concerned about his ability to make decisions, compares the administrative structure to the socio-economic status of developing countries: "They have no middle-class. We have no middle-management. All decisions are made at the top. Department chairmen have neither control nor support."

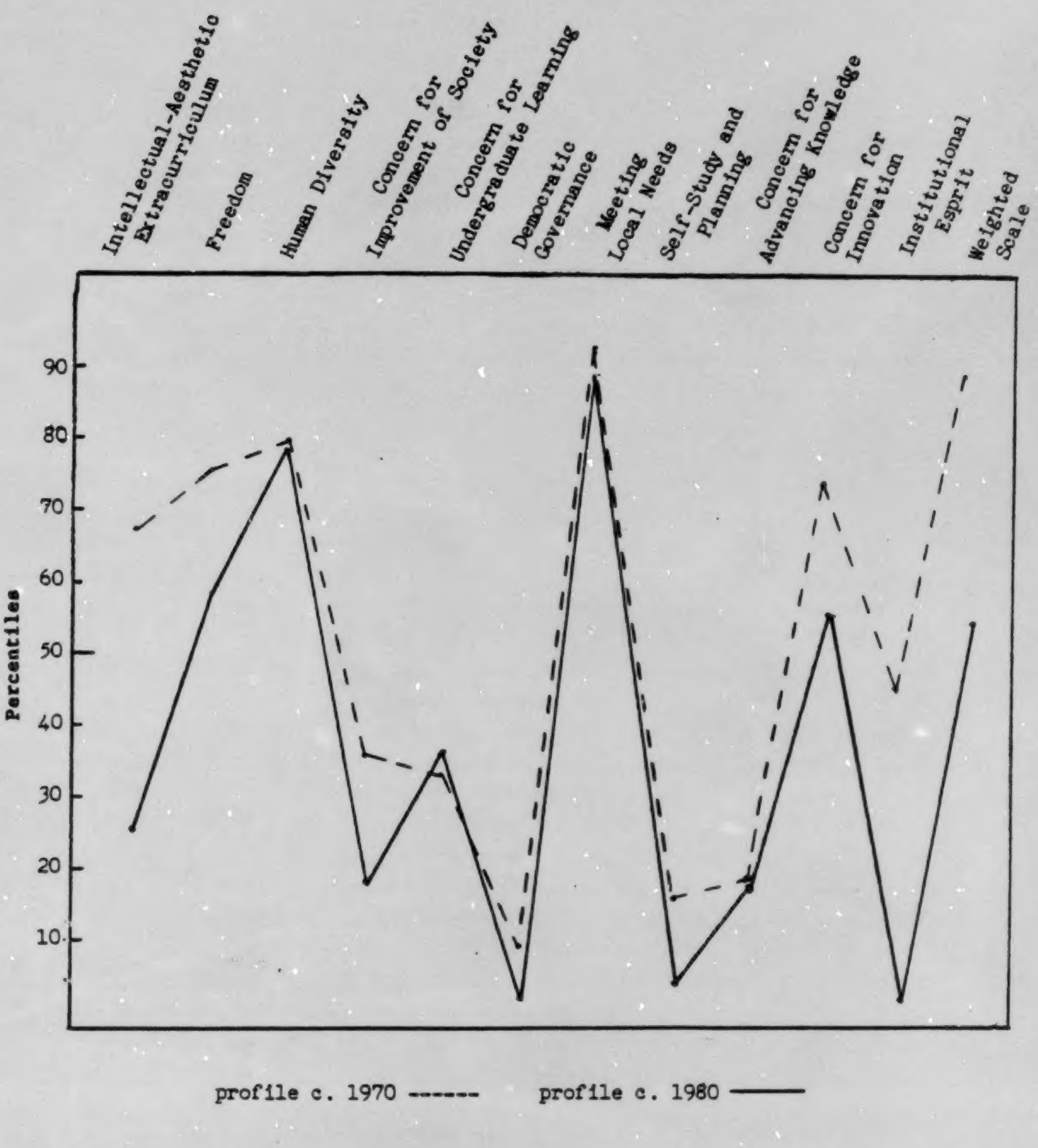
Faculty members, of course, perceive themselves as wielding even less authority. They are dissatisfied and fractious. They view their union as a vent for their frustrations.

The president has held office since the mid-1960's. He has always been a strong, domineering individual in the view of many, but his style hardened with the budget problems in the mid-1970's. His detractors acknowledge that he has the best interest of the institution in mind. One explains that he is "intolerant of waste but is too impatient and wants to make change happen too quickly." Moreover, he has pressured the faculty without simultaneously rewarding excellence. The faculty are "encouraged" to build new programs but not offered retraining -- not even the usual sabbatical opportunities. The board supports the president because of his efforts to control costs.

The cost control efforts have enabled the college to reduce expenditures per FTE even as enrollment declined between 1977 and 1980. The IFI data suggest that the effect of this efficiency may have dimensions other than dollars. The 1972 profile shown on Chart 6-2 is similar to the early profiles of most community colleges in the study, with three exceptions. It shows considerably higher scores on the Intellectual-Aesthetic Extracurriculum (IAE) and on the Freedom scales, and lower scores on the Democratic Governance scale. The high Intellectual Aesthetic Extracurriculum score, unusual for a community college, is a reflection of the institution's (president's) commitment to the arts and cultural activities outside the formal class setting. The high Freedom and low Democratic Governance measures are not contradictory. Freedom reflects the openness of the campus to diverse lifestyles, political beliefs, and behaviors. Democratic Governance gauges the inclusion of faculty and students in the institutional decision-making process. In 1980, the college, like most other colleges in the study, exhibited less interest in bettering society and was less likely to adopt institutional changes. Freedom on the campus also declined as did efforts for self-study and planning. The Intellectual-Aesthetic Extracurriculum scale score fell from the 65th to the 25th percentile. Finances may have something to do with this change. For in 1972 only 12 percent believed that "little money (was) generally available for inviting outstanding people to give public lectures" while in 1980, 62 percent of the respondents perceived this lack of funds. More serious for the college is the decline on the Institutional Esprit scale. In 1972, 71 percent of the faculty considered the senior administrators to be well qualified. Only 31 percent in 1980 had the same positive view of the administration. Simultaneously, the cohesiveness and faculty spirit have plummeted. Almost 60 percent of the respondents noted a strong sense of community in the first administration of the IFI. Eight years later the percentage is 31. Almost half of the faculty thought morale to be high in 1972 while only 10 percent agreed in 1980. The percent agreeing that the college was successful in achieving its goals declined over the decade from 84 to 71 percent.

The college had some financial problems especially in the middle of the decade. The president's efforts to bring the budget under control were

Chart 6-2: Changes on the Institutional Functioning Inventory: Suburban Two-Year College



successful although they took a toll in faculty morale, sense of community, and institutional effectiveness. The next community college exhibited similar financial problems but in the context of very different style of governance.

City Two-Year

Like Suburban Two-Year, City Two-Year grew rapidly in the late 1960's and early 1970's. In 1977 enrollment stood at two and a half times the 1968 level, but in 1980 enrollment fell 3 percent from the peak. (Suburban Two-Year lost 4 percent of its enrollment during the same period.) Education and general income followed the same pattern rising sharply but falling even more severely than enrollment. Six percent of education and general income was lost between 1977 and 1980. As a consequence, education and general income (and expenditures) per student also declined during this period. Suburban Two-Year and City Two-Year are located in the same state. It is, therefore, not surprising that the split between local and state income is almost identical. In 1980, the state assumed 36 percent of City's educational and general income and the local government assumed 22 percent; twelve years earlier both governments contributed 30 percent each. Faculty salaries declined 19 percent at City Two-Year, almost matching the 22 percent drop at its suburban counterpart.

Although the two colleges are in the same state, the economic conditions of the local governments are not at all identical. Suburban county has had a fairly robust economy with personal income rising 15 percent during the period studied, although, because the population also rose very rapidly, personal income per capita increased only 1 percent. In contrast, the rural county in which City Two-Year is located showed small declines in both personal income and income per capita. Moreover, the county does not support the college. Local funds come only from the city, a municipality in even worse economic shape than the county.

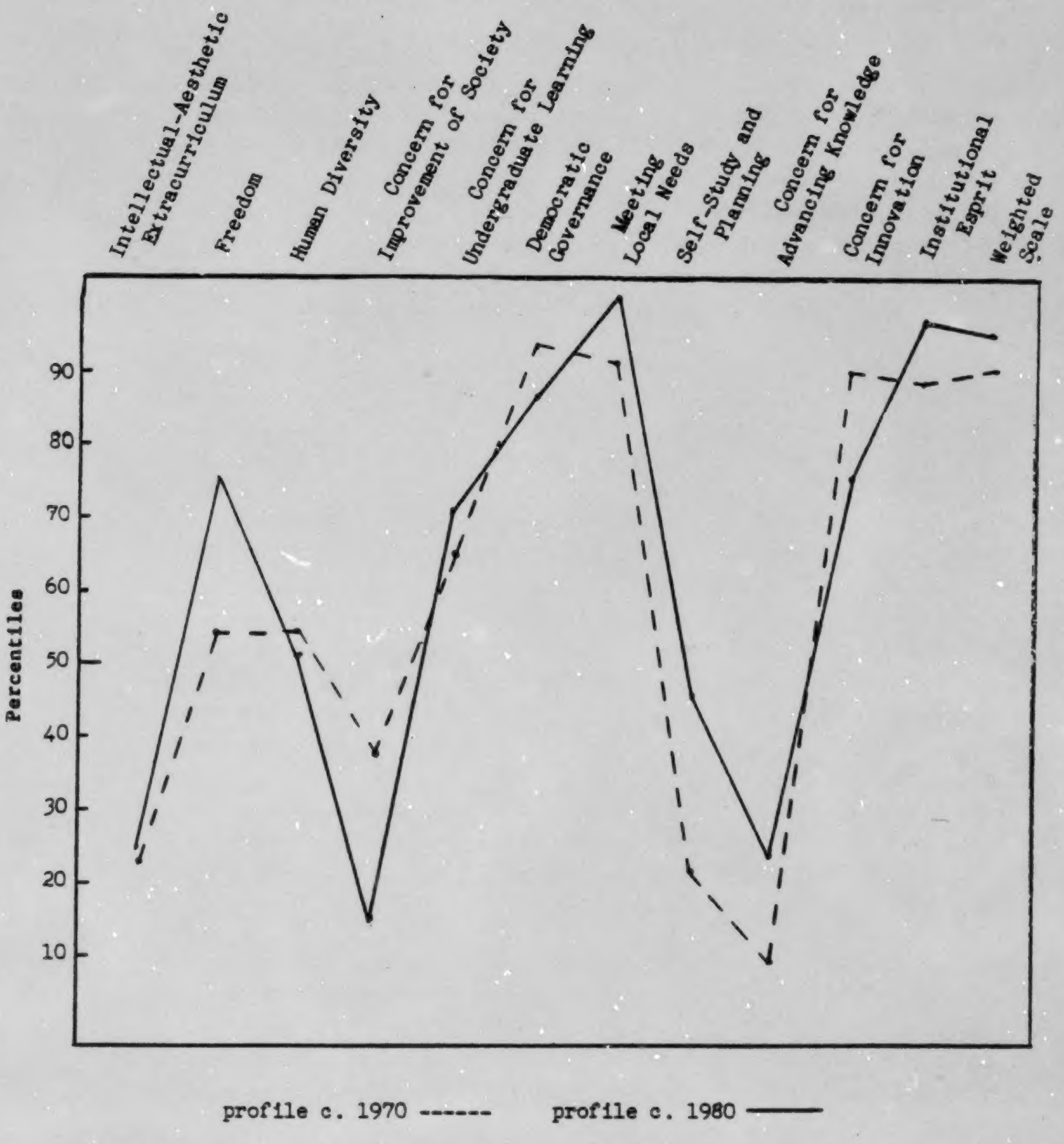
In sum, the financial settings of the two colleges are different, with City Two-Year's being less hospitable than that of its downstate neighbor. The administrative histories and styles of the two colleges are still more different than their financial conditions. Asked about governance, administrators at City Two-Year were emphatic about their philosophy, expectations, and demands. When the college was founded thirty years ago, "the first president really pushed collegial government. This tradition continues. As faculty are hired, it is made clear to them that they must get involved with the college and the community." Faculty believe that their involvement is not simply token. They also recognize that they are supported and rewarded by the administration. To increase opportunities for faculty support, the college created an independent foundation, one of the purposes of which is to finance faculty development efforts. In addition, the college budgets $250 for each member of the faculty for professional travel each year. The dean arranges receptions when a professor publishes a book or receives some honor. Faculty value this attention although what goes along with it, of course, are high expectations of faculty from the entire administration. The stated importance for faculty to be involved in governance and the community was already mentioned. Teaching performance is monitored very closely. In 1980, five of the twelve promotion decisions were negative. Performance evaluations are, of course, most important in the pre-tenure period, but they continue to be important after tenure. Four tenure contracts were broken "for cause" in the last ten years. Another striking difference between this community college and others is its conservative educational philosophy. It has retained a strong commitment to the liberal arts and to transfer programs. It avoids the most technical skill-oriented training programs. In some cases, it pursues these programs, but only in coordination with the state's vocational school system and without giving college credit. City Two-Year has confronted the problem of declining student ability head-on. All students are tested before admission and "tracked." Students in the bottom quarter of the entering class get special remedial assistance including "motivation training." The college will soon administer "exit exams."

The IFI offers evidence of the success of this "carrot and stick" approach blended into a collegial environment. The 1971 IFI profile, shown on Chart 6-3, is superior to that found at the average community college. City Two-Year matched the early average scores on the Human Diversity, Meeting Local Needs, Self-Study and Planning, and the Concern for Advancing Knowledge scales. On the remaining seven scales it significantly exceeded the community college average, and on several scales the differences were considerable. The Democratic Governance score was 45 percentiles higher than the average. The Concern for Undergraduate Learning and the Institutional Esprit scales were 25 percentiles above the community college average. Concern for Innovation stood 30 percentiles higher.

The second IFI results suggest that the recent financial problems have had no impact on campus climate. Following the trend at all campuses, the Concern for Improvement of Society scale declined. Concern for Innovation also fell but not very much, and the gap between City's score and the community college average increased to over 40 percentiles. All other scale scores increased or remained essentially stable. The weighted score provides the best summary statistics. City's score on the first administration was 22 percentiles above the public community college average. In 1980 its weighted score was 40 percentiles higher.

In spite of the recent enrollment drop, the declining expenditures per student, the lower average faculty salaries, and the release of tenured professors, the faculty evaluate their institution just as favorably as they did

Chart 6-3: Changes on the Institutional Functioning Inventory: City Two-Year College



ten years earlier. They have confidence in their administration. Morale is high. The institution's commitment to undergraduate students is well above the national average and is stable. In short, the financial trends at City Two-Year are less consequential than its bold academic leadership. Faculty are partners in the enterprise and are supported by the administration, but they also are held accountable for their actions.

Mountain College

Mountain College, though not one of the most highly selective institutions in the nation, is a reasonably prestigious liberal arts college, with a broad regional, perhaps even a national, constituency. It is recognized as a solid undergraduate college with a strong emphasis on teaching. Innovative, but not radical curriculum design has been a hallmark of the institution. The college is located in a beautiful resort area, and the local geography is an attractive feature to students and staff. The semi-isolated environment has the effect of bringing the college community together -- an advantage when harmony prevails but a distinct disadvantage during discordant times.

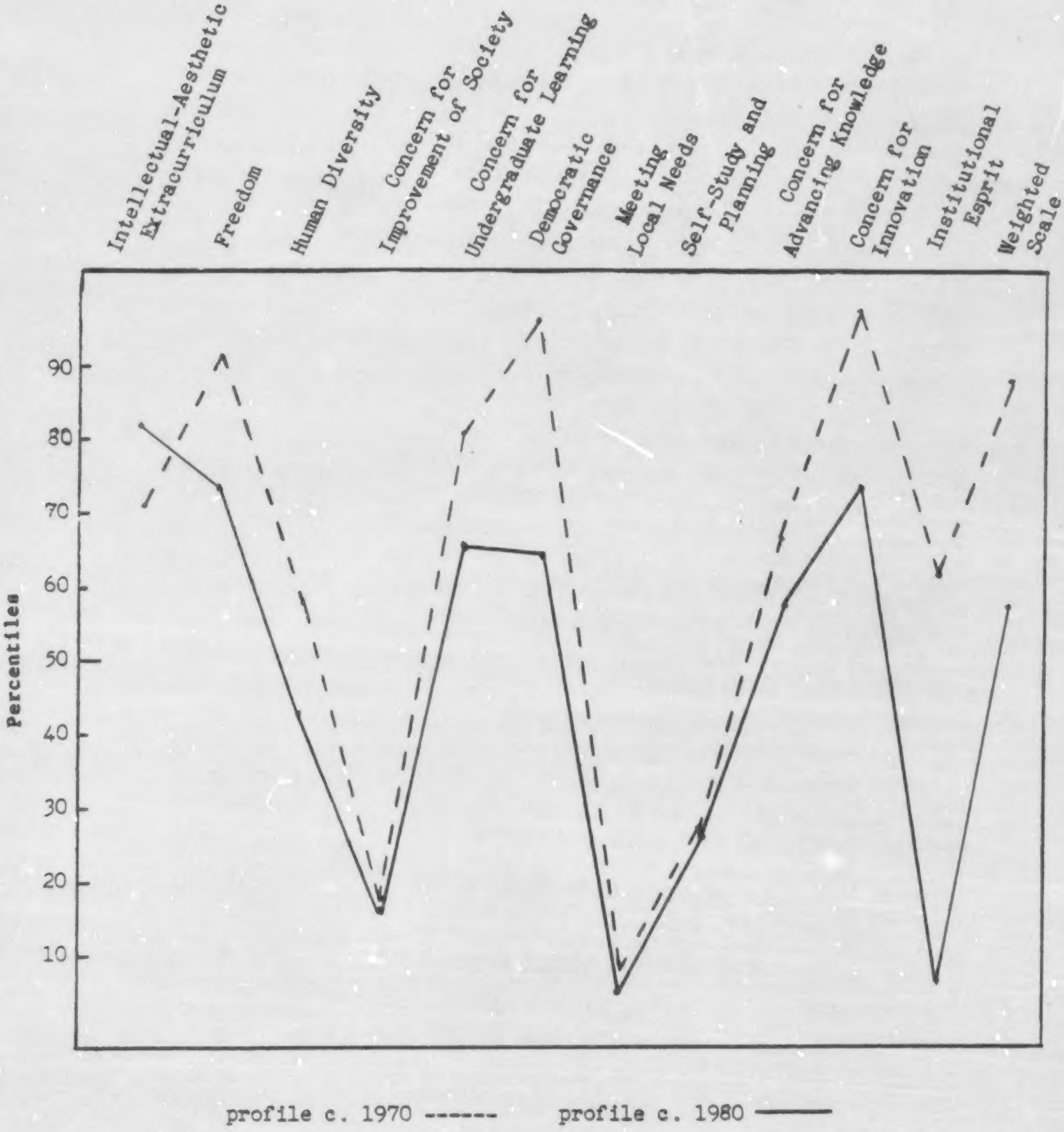
"Sturdy" is probably the best financial description of the college. Enrollments have tended upward slowly but steadily since 1968. For example, the 1980 enrollment is 6 percent higher than that of 1977. All students are full-time. Both education and general and total current fund income has increased in real dollars for each succeeding year studied. Education and general income per student rose from the $5000 level to about $6000 in 1974 and has remained level since then. Tuition supports 80 percent of education and general budget. Endowment and private gifts provide 10 percent of the college's income. State and federal governments provide 4 percent and 3 percent of the college's income respectively. Expenditures on maintenance and operations have increased from 12 percent to 17 percent of education and general outlays. Student aid now consumes a somewhat larger share of the budget than it did ten years ago. Other categories have been stable or trended down slightly. Following patterns similar to those found at most colleges, faculty salaries have declined 22 percent since the peak year in 1971. Still, this college ranks in category one by the AAUP, placing it in the top 20 percent though below the top 5 percent of similar institutions.

The balance sheet is sound with healthy trends. Fund balances increased from $17 million to $33 million in current dollars. Debt as a percent of equity declined from 22 percent at the beginning of the decade to 10 percent in 1980. The endowment and plant funds have each increased almost two and a half times in size, again in current dollars. Financially, the college exhibits the same strains as those experienced by most liberal arts colleges but without the cracks in financial foundations found in many. Enrollment has grown steadily, and total income, and income per student have increased in purchasing power over the twelve-year period. The college has managed to build endowment and plant while reducing debt.

With these unusual financial accomplishments it is not surprising that the chief financial officer enjoys a large measure of independence. What is startling, however, is that the financial vice-president dominates all campus planning to the exclusion of the chief academic officer and even the president. The financial officer's personal agenda is to preserve cash, continue building, and support the athletic program. He has achieved this power because of three circumstances. First, the immediate past president concentrated his efforts on external constituencies. (A new president had been appointed but was not on campus by the time of the visit.) Second, the financial officer enjoyed the confidence and the friendship of the chairman of the board of trustees. Finally, the chief academic officer did not assert himself forcefully. These are extraordinary, indeed almost incredible circumstances. The financial vice-president enjoys such power that, as the president's representative for this study, he distributed the IFI questionnaire to the faculty without informing anyone in the academic administration. The academic vice-president did not know of the faculty survey until he was shown the results during the campus visit. Similarly, several people in the academic administration talked about vague plans to build a classroom building on the "south lot." A financial planning assistant confided, however, that "the academic people do not know but we are building a field house: I have seen the architect's plans."

The faculty are not unaffected by this as evidenced in the IFI profile shown on Chart 6-4. Like many other distinctive liberal arts colleges, this college has a special profile. In 1973, the campus ranked at the 70th percentile in the Intellectual-Aesthetic Extracurriculum scale. It ranked at the 80th percentile on Concern for Undergraduate Learning and higher on Freedom, Democratic Governance, and Concern for Innovation. On Institutional Esprit, it was in the top 40 percent of all institution. Seven years later the faculty assessments declined markedly. *The Institutional Esprit scale fell from the 61st percentile to the 6th!* When faculty were asked whether top-level administrators provided effective leadership, only 28 percent agreed compared to 65 percent seven years earlier. When faculty were asked about "staff infighting and back biting" 47 percent thought it was common in 1980 compared with 28 percent in 1973. Almost 70 percent of the professors rated faculty morale as high in 1973, whereas in 1980, only a third were so inclined. *In all, seven scales declined* including the Democratic Governance scale, which dropped from the 93rd to the 64th percentile. Concern for Undergraduate Learning fell 15 percentiles. Concern for Improvement of Society, Meeting Local Needs, and Self Study and Planning were never high and remained unchanged. Intellectual-Aesthetic Ex-

Chart 6-4: Changes on the Institutional Functioning Inventory: Mountain College



tracurriculum rose modestly to the 81st percentile. The Weighted Scale fell 30 percentiles.

In sum, something very dramatic occurred on this campus in seven years. Although the college has built an impressive financial base, its sense of community is threatened. Decision making is distorted, and the faculty has become alienated. It is possible to turn this campus around but it will take major changes. As one respondent put it, "If the new president does not fire the financial vice-president in six months, it will be too late."

Plain College

Unlike Mountain College, the Plain campus is located in a Midwest farming town with very little geographic appeal. The college has historical links with a Protestant denomination, but is now a secular liberal arts institution, attracting students primarily from the local region. In the early sixties, Plain attempted to recruit freshman from the East coast, but those who came had neither academic ability nor values compatible with those of local students, and the recruitment effort has since been abandoned. The college is in competition with several other private liberal arts colleges of the region and with the state's flagship university located an hour's drive to the north.

Under the circumstances -- modest reputation, no obvious distinction, and a large number of competitors -- it would not be surprising to find the college in serious trouble. Indeed, enrollment fell about 20 percent in the early seventies to 610 FTE. By 1980, a large portion of that loss was recaptured, but the college still enrolls fewer than 700 students. To achieve even this level of enrollment the college admits 90 percent of all applicants. A decade ago it admitted 80 percent. Fortunately, the yield on applications has increased from 40 percent ten years ago to 60 percent in 1980. Education and general income per student has moved (unevenly) from $3,400 in 1968 to $4,900 in 1977. Most recently the figure stands at $4,100, down 17 percent from three years earlier. A larger share of the education and general expenditures currently goes to administration and maintenance and a smaller portion to "instructional and departmental research." Faculty salaries, never high, have decreased 23 percent in purchasing power. They now average $16,500. On the bright side, private gifts and grants have more than doubled during the decade, and the college has been able to place a large portion of these funds into endowment. Debt to equity is .24 -- quite a bit lower than the peak in 1974 of .48. It is still uncomfortably high and above the 1968 level of .20.

Plain College faces all the obstacles of a typical regional liberal college without the advantages of some. It does not, for example, have easy access to a larger population for continuing education. The state in which it is located does not assist private colleges nor their students. The depressed IFI profile of 1968 shown on Chart 6-5 seems to summarize the college's prospects as it entered the 1970's. Only Democratic Governance reached the 50th percentile. Nine scales were at or below the first quartile. The same year that the first IFI was given, a new president and his administrative team took office, and twelve years later the faculty responses to the IFI tell an entirely different story. Every scale except Human Diversity has jumped upward. Self-Study and Planning climbed 87 percentiles! Concern for Innovation is up 80 percentiles. Institutional Esprit, at the 25th percentile in 1968, is now at the 60th. In that early administration, one-third of the faculty thought that "top-level administrators provided effective educational leadership." Two-thirds believe this is true in 1980.

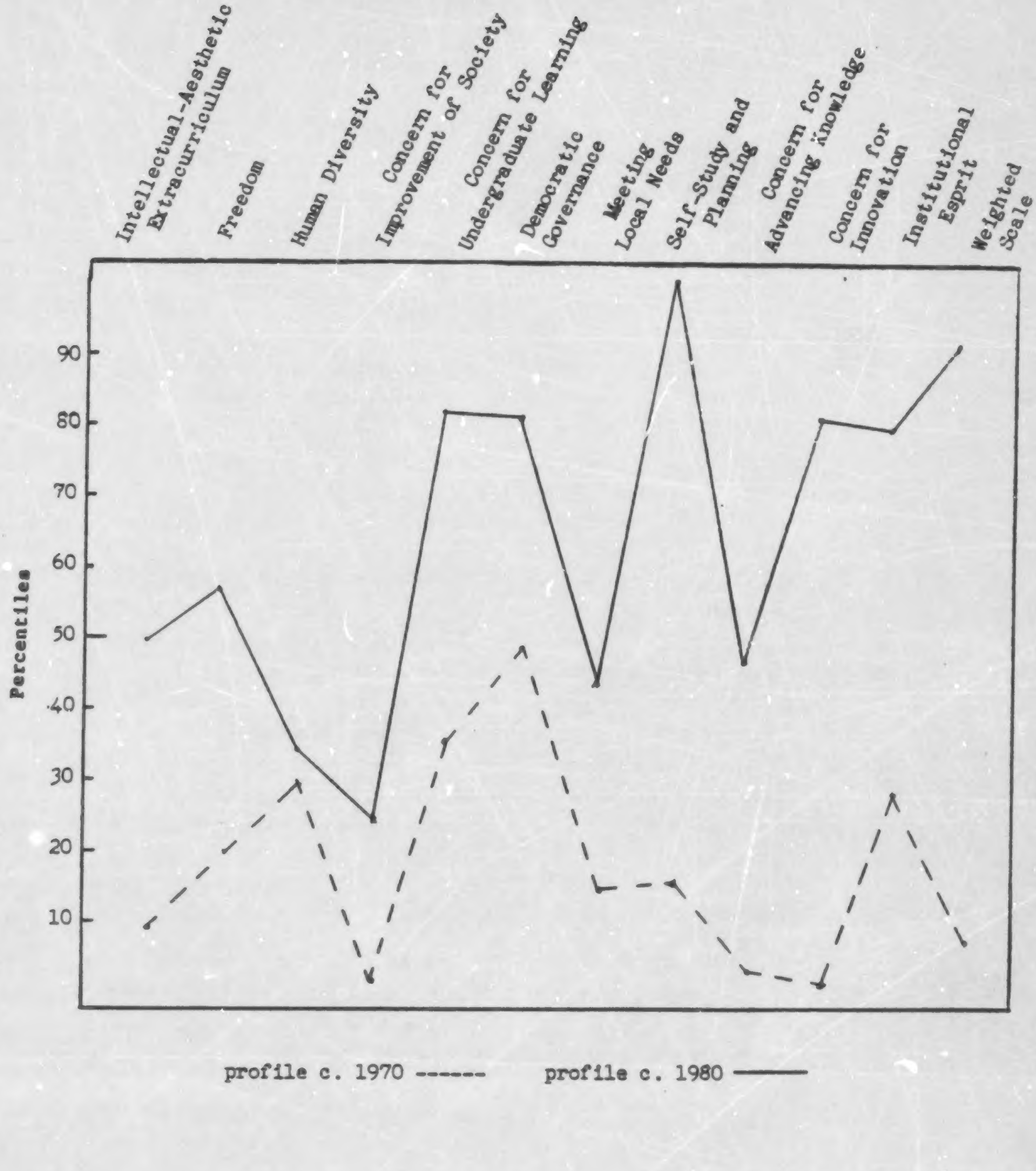
There has not been a real financial turnaround. Salaries are 23 percent lower, and enrollment is 8 percent below the 1971 peaks. Strategically, the situation has not changed--except for the fact that now the college believes in itself. The force behind the environmental changes of the 1970's is a tenacious and visionary president with a strong administrative team. The president employs four principles of leadership -- planning rigorously, sharing information, selecting people carefully, and delegating authority.

It is not accidental that the self-study and planning scale has risen 87 percentiles. In the early administration of the IFI, most faculty were unaware of any planning efforts. In 1980, however, every single respondent recognizes that the college has a plan, which is distributed widely, and that the plan is "based on a reasonably clear statement of goals." When engaging in conversation about their college, the president and other officials refer to the five-year plan. Indeed, they display the document and point to statements within it. It is obvious then, that the five-year plan is not the product of a pro-forma exercise. Rather, it is a document that is used constantly and updated annually with the active involvement of all constituents including the trustees.

The second aspect of this college's administrative style is the complete sharing of information. For example, the college was recently reviewed for accreditation, and the accreditation team's report was made at an open faculty meeting. The minutes of all board meetings are on file in the library. The five-year plan is, of course, available and is very detailed. It discusses which programs will grow and which are expected to contract. It also details the college's plans to implement proficiency exams in mathematics, to begin an MBA program, and to limit salary increases to 7 percent. All this, and more detailed information is available to the faculty.

The administration prides itself on its attention to careful selection, review, promotion, and termination of personnel. When faculty are reviewed

Chart 6-5: Changes on the Institutional Functioning Inventory: Plain College



for tenure, the dean and the department chairperson personally interview students from the faculty member's classes. When discussing one negative tenure decision, the dean commented that the dissatisfied students were not chronic "complainers." He felt he had to consider their opinions especially carefully. In 1980, three first-year teachers were dismissed. Normally first-year appointees would be given extra time to meet college standards. Letting all three go at once could have been particularly troubling to faculty, with reverberations throughout the college community. Nevertheless, the dean felt that their teaching was so poor it would have been unfair to them, as well as to students, to carry them further. Their faculty colleagues reluctantly acknowledged that these decisions were "tragic but in the institution's best interest." Rather than demoralizing the institution, these types of painful decisions seem to have galvanized it. The college faculty has developed a sense that it is in control of its own destiny.

You cannot hold people accountable without giving them control. Faculty members acknowledge that they are free to take risks and applaud the free rein the president gives them. The president comments, "I am an expert at not knowing what is going on. My job is policy and people." Besides the administrators and the faculty, the board members are held accountable by each other. Their selection is based on their expertise to serve on specific committees. The committee then works with the faculty and often in competition with other committees. A few years ago the academic affairs committee of the trustees wanted a 20 percent faculty pay raise. The financial committee opposed it. A compromise was set at 12 percent.

Long-range planning has always been a central tenet of higher education. In practice, however, its function is too often ritualistic, and it is therefore comforting to see the concept applied with integrity. Then too, the sharing of information and authority is another basic belief in the thinking about higher education, and Plain College, in contrast to Mountain, has held to these beliefs impressively, integrating them in the college's life to great advantage. Moreover, the president, refusing to accept that collegial governance relieves him of academic authority, is forced into a difficult balancing act; an act he manages superbly. This too is an ideal of higher education but one we get to see too rarely.

Special University

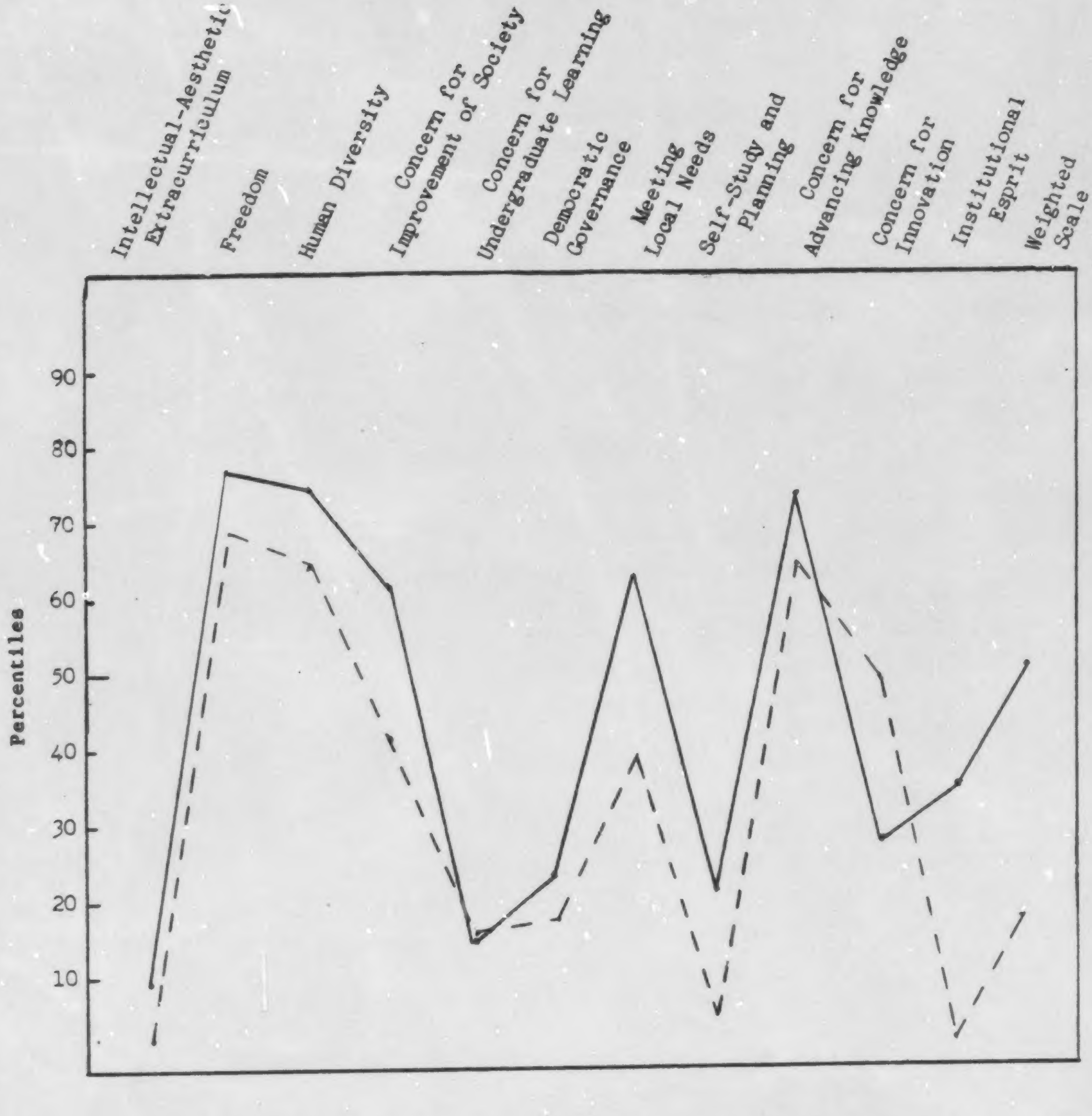
Special University was founded in the early 1960's to train health-care professionals. Mission is changed to protect anonymity. The first decade of its existence was a boom period. When the first IFI was administered, enrollments were increasing at almost 40 percent per year. Compared with other public institutions of similar size, education and general expenditures were 35 percent above the national average and rising. Salaries were 26 percent higher than average. Although the university had a unique and attractive professional training mission, the institution was expanding its scope as it added programs in the liberal arts and other areas. Unfortunately, the university was part of, and financially bound to, a larger public system. In the mid 1970's enrollment began to slip at Special University, and the entire system was beset by political and financial problems. Special University, being the youngest institution in the system, did not have the political support that the other colleges and universities enjoyed. The new programs, moreover, were crowding in on its unique image, and there was serious public discussion of closing the campus.

In 1976 the current president was appointed on an acting basis. His actions, however, were not those of an interim executive. He viewed the prospective closing as an "image problem:" the value of the institution was not well perceived by either system officials or the public. In response, he arranged for public forums on campus dealing with health-care issues. State blue-ribbon panels addressing the subject were based at the institution. The president also hired media consultants to assist him in public relations. He successfully appealed to the system to allow the university to consolidate and stabilize, offering in return to cut the number of programs from thirty to eight with the understanding that he would retain all tenured faculty. Apart from making these program cuts, he left curriculum details to the dean and the faculty.

The president's personnel philosophy, like those of other successful presidents in this chapter, is to be extremely demanding but to reward excellence publicly. In his first year as acting president, he vetoed all fifteen promotions reaching his desk. His terse explanation was: "They did not meet my standards." When faculty do meet his approval, he arranges for them to receive public service grants or to serve on commissions. Receptions for faculty authors are commonplace. Unlike the president at City Two-Year, this president refused to challenge the tenure system, probably a correct decision. There were too many other "fires" requiring his attention, and the college was anything but cohesive at that time. The early IFI (administered before the real financial problems began) does not portray a very strong university. Institutional Esprit was at rock bottom, and several other scales were almost as low, as shown on Chart 6-6.

Enrollments had stabilized, but educational and general expenditures per student were still declining in 1980. The college, like the system of which it is a part, continued to have financial problems. Faculty members, however, offer a more positive evaluation of their college than they did in 1971. Concern for instruction of undergraduates is still minimal as is the cultural climate. But faculty see their institution as more active academically (Advancing Knowledge and Improving Society), and the continuing education

Chart 6-6: Changes on the Institutional Functioning Inventory: Special University



and outreach efforts are considerably more effective (Meeting Local Needs). Only one scale, Concern for Innovation, declined.

These gains were made despite the continuing financial problems. Everyone attributes the modest optimism that now exists to the president's leadership. One faculty member commented: "He gives 110 percent and if you don't give 90, watch out."

SUMMARY

One purpose of our visits was to ascertain the accuracy of the financial and IFI measures. We did not raise the process of verification throughout the chapter but we did verify all measures during the visits. In a few instances we found minor discrepancies in enrollment or financial data. In none of these were the basic findings altered. The IFI data were accepted in every instance, by both administrators and faculty, regardless of how unflattering the results were to the institution.

The second purpose of the visits was to gain some contextual understanding of the relationship between finance and functioning. At each campus we asked faculty and administrators how finances have affected their work. The questions bewildered most faculty, who know they are supposed to be living through hard times but, on reflection, are uncertain just how this lean period really changes what they do. Only at one institution, a Catholic women's college, are enrollment and financial trends prominent issues in the discussions about the IFI. This institution, however, is in far more serious financial difficulty than any of the others, with enrollments dwindling and debt unmanageable.

We found administrators somewhat quicker than professors to cite the problems caused by inadequate income. Most commonly, they mention deferred maintenance. They also mention that libraries are being shut early and fewer books purchased, and that desired equipment is not being ordered. Then too, we found administrators more likely to express concern over depressed faculty salaries.

All in all we came away from our interviews with administrators and faculty with three impressions. First, financial problems, although serious did not gravely disrupt operations on most campuses in 1980-81; at only one of the thirteen institutions visited in this study did the faculty associate the financial problems with the attitudes of their colleagues. Second, the financial problems are currently affecting administrators more than faculty. After all, the maintenance of the buildings and grounds is an administrative responsibility, and although the campus may be a little bit more shabby, professors are largely unconcerned. Also, although faculty salaries have not kept pace with inflation, the cumulative loss of about 20 percent is not overwhelming these professors, who are glad to have a job at a time when many of their colleagues do not. Administrators also worry more than professors about programs that are not in place because of economic constraints. But because these programs do not exist, the faculty who would be involved with them are not there to respond to the IFI. All this raises the possibility that faculty, especially those with tenure, may be somewhat isolated from the financial worries marking the decade. A third impression, which reinforces the statistical data, is that faculty are more concerned with governance than with finance. At institutions where the IFI is depressed, the discussions initiated by the faculty (with the exception cited above) center on administrative style, not on enrollment declines nor on legislative penury.

A third purpose of the study was to better understand whether administrative actions can intervene between financial trouble and campus functioning. The college visits provide strong evidence that administrative action and style are more important than the size of the fund balances or the number of full-time-equivalent students. The next chapter, reviewing the statistical as well as the qualitative data, discusses the findings in more detail.

CHAPTER SEVEN
SUMMARY RESULTS

Ninety-three American colleges and universities particiapted in the study upon which this report is based. Detailed financial, personnel, and other institutional data were gathered for every third year between 1967-68 and 1979-80. Samples of faculty at each institution were surveyed in the late 1960's or early 1970's and again in 1980-81. The survey instrument for both sets of surveys was the Institutional Functioning Inventory developed by the Educational Testing Service. Contextual and explanatory data were gathered by visiting thirteen colleges and universities, and interviewing faculty and administrators. This chapter summarizes the findings and conclusions.

FINANCIAL RESULTS

In the late 1960's and early 1970's reports on the worsening financial condition of American colleges and universities were widespread. In 1973, Jellama voiced particular concern for the independent sector, concluding that "much of private higher education has been undergoing a financial crisis of grave proportions."[33] Two years later Lanier and Andersen express concern for both sectors, noting that "progressive deterioration has been occurring in the financial condition of higher education as a whole in recent years. Furthermore, the process of decline appears to have accelerated during the past three years."[34] More recent reports show the trends to be less clear-cut and more complex. Minter and Bowen, reporting on trends at the close of the decade, conclude that there has been stability in the general financial and enrollment trends at public and private colleges but that both sectors have been using up physical and human capital.[35,36]

---

[33] William W. Jellema, *From Red to Black?* (San Francisco: Jossey-Bass, 1973) p. ix.

[34] Lyle H. Lanier and Charles J. Andersen, *A Study of the Financial Condition of Colleges and Universities: 1972-1975* (Washington, D.C.: American Council on Education, 1975) p. 75.

Financial Operation

These analyses confirm the Minter and Bowen reports with respect to the consumption of physical and human resources. Nevertheless, the decade was not a financial disaster. After changing currency figures into constant 1980 dollars, we found that the educational and general income statistic rose rapidly (44%) over the twelve-year period. On a per student basis, the total increase is only 10 percent, with all of the growth occurring between 1968 and 1974. There are some modest variations by sector and Carnegie Classification, but generally these patterns hold. The data suggest that the average college had considerably more purchasing power at the close of the decade but most of these resources have been used up by enrollment increases. Over the period, Washington became a more important source of funds with its share of educational and general income rising from 6 to 9 percent. The increase of federal funds was matched by declines in state support at public institutions and by declines in tuition and private gifts and grants at independent colleges and universities. Local support for public community colleges has fallen sharply but has been replaced by state funding. As funding moves away from the campus there is the worrisome possibility that more decisions will be made by officials who are both geographically and educationally "out-of-touch." The Carnegie Council recognizes this threat.

> In 1980, a principal potential is more external participation in the internal life of the campus as the federal government, in particular, has gone from being an investor to a controller of the campuses.[37]

The decline in *net* tuition is even more severe than is apparent from examining income statistics. Institutionally supported student aid has risen from 8 percent of educational and general expenditures in 1968 to 12 per-

---

[35] W. John Minter and Howard R. Bowen, *Preserving America's Investment in Human Capital* (Washington, D. C.:American Association of State Colleges and Universities, 1980).

[36] W. John Minter and Howard R. Bowen, *Independent Higher Education: Fifth Annual Report* (Washington, D. C.:National Institute of Independent Colleges, 1980).

[37] Carnegie Council on Policy Studies in Higher Education, *Three Thousand Futures* (San Francisco: Jossey-Bass, 1980) p. 116.

cent in 1980. In effect, net tuition -- tuition income as a source of support for the educational programs -- has declined by a similar percentage. Jellema observed this "student aid deficit" occurring in the early 1970's[38] and it has, according to these data, continued to grow. The increase in unfunded student aid is especially noticeable at less prestigious liberal arts colleges. Public officials, as they attempt to maintain a balance of enrollments between the sectors, must recognize that this is a significant financial drain on private colleges.

In addition to this evidence of declining "net tuition" shown in campus financial reports, there has been a very rapid escalation of public student aid funds which rarely pass through institutional accounts. Moreover, a larger proportion of students are enrolling in less expensive public colleges. The result of all these changes is that students and their parents are paying a smaller share of the higher education bill in 1980 than they did in 1970. One reaction is to simply exhort parents and students to pay more. Many of the new students, however, come from low income families and do not have the resources. If it were not for the taxpayer's growing resentment over the magnitude of government enterprises and the resultant bills, this report might chide the states and the federal government to be more financially forthcoming. But a more desirable and realistic solution is the adoption of policies that encourage and facilitate private savings for education by those who are able. Current tax policies do the opposite. Interest and dividends from personal savings are taxed even though a large percentage of this income is really compensation for inflation. The popularity of Individual Retirement Accounts (IRA's) is evidence of how a policy to encourage private savings for higher education might work. Individuals who open up IRA's can reduce their taxable income by $2000 to $4000 each year. This money is put into a retirement account that earns non-taxable income. Taxes are paid only when the money is withdrawn during retirement years. Ironically, the IRA's divert and lock up savings that might otherwise be available for educational expenditures. When savers using IRA's have children of college age they will face a tax penalty to use IRA funds for education. Higher education officials should work with Congress on drafting legislation that would allow parents to borrow from these funds for educational purposes without tax penalty. If middle and upper-middle income families can be induced to save for college, public funds can be more efficiently channelled to low income families.

Administration and general support expenditures receive a larger share of the budget in 1980 than in 1968. Public institutions are spending slightly more on research and public service, particularly the latter. In this analysis of budget percentages, the category "instruction and departmental research" is on the losing end in both sectors. The cause is no secret. Faculty salaries have not risen as rapidly as prices during the 1970's. This is one of the reasons why Minter and Bowen worry that the human capital of higher education is in danger of "serious deterioration".[39] The potential problem is real. Obviously, if the trend continues into the indefinite future, no one but the independently wealthy will be able to afford to be college teachers. But such trends cannot continue into the indefinite future. The decline in faculty pay in the 1970's matches almost exactly the increases of the 1960's. But when faculty salaries are compared with those of other professionals (physicians, attorneys, and dentists) the decline in relative earnings is severe. Dentists, for example, earned about as much as faculty in 1940; by 1980, however, the income in this profession is almost 175 percent higher than that of the average college teacher.

---

[38] Jellema, pp 131-135.

Depending upon the reference groups and years selected for analysis, the salary data can be used to support different conclusions. The more important questions to be answered are the influences of current salary levels on the presently employed academics and the effects on the career choices of prospective academics. With regard to the latter, attempts to raise the salaries of currently employed faculty may be counterproductive if, as a consequence of fixed institutional budgets, fewer professors can be employed. The hands of campus officials are bound to a great extent by budgetary constraints and market conditions. State officials may make funds available to increase salaries or to specifically lure new faculty even if not justified by the current standard student-faculty ratios. Private colleges, of course, are unlikely to have recourse to such supplemental funding.

One costless way in which college administrators can increase the income of faculty is to let grants and contracts to pay "override" income to faculty. A professor receiving a grant, for example, might write the budget to include a 15 or 20 percent salary supplement. At public institutions, such a change would require system or even legislative approval. An impediment to such a policy is that it may be viewed as a form of institutionalized "double dipping" and, therefore, politically awkward to initiate. However, public concern about the inadequacy of faculty salaries is rising and now may be an appropriate time to institute incentives like this. A potential disadvantage of this policy is that it might tip the balance of faculty activities from teaching to research. Bonuses to particularly effective teachers would help to correct this tendency.

Concerns have also been expressed about the rising incidence of deferred maintenance. The percent of educational and general expenditures devoted to plant operation and maintenance has not changed appreciably, but this percentage statistic is an inadequate indicator. First, it fails to consider the amount of construction that has occurred in recent decades. If we review the trend in "maintenance and plant operation" expenditures per $1000's of plant, we see a 43 percent decline over the decade; and even this may understate the potential problem as a larger percentage of current "maintenance and plant operation" expenditures are being devoted to fuel costs. Colleges, like every other organization buying fuel, have been forced to pay much higher market prices. Also, plant values have an historical basis. If plant replacement values were in the denominator, the ratio of expenditures to plant value would have shown an even greater decline.[40] At some campuses, added expenditures for security have further diluted the "maintenance and operations" budget. It is impossible to estimate how much of the drop in maintenance expenditures has been absorbed by improved efficiency or by reducing cosmetic activities -- cutting lawns less often, washing windows more infrequently, and so on. To the extent that the reduction in maintenance expenditures has created a backlog of necessary structural repairs, the physical plants of colleges and universities will deteriorate and major capital outlays will be necessary in the coming decades.

---

[39] Minter and Bowen, *Preserving America's Investment in Human Capital* pp.89-91.

Capital Structure of Private Institutions

The assets of public colleges are the property of the state, and it is the state that is ultimately liable for public college debts. As a result, analyzing the balance sheets of public colleges has limited usefulness in a study like this. Private colleges, on the other hand, are independently responsible for their debts and for insuring that there are sufficient assets and capital reserves to carry out their missions. A review of private college balance sheets shows that most have been successful in reducing plant debt. Most private colleges own a greater proportion of their plant in 1980 than in 1970. Funds available to meet debt obligations have grown in proportion to financial liabilities. Loan fund balances have grown at least as rapidly as educational expenditures. Endowment fund balances have recently slipped a little compared with expenditures. In general, the capital structures at most private colleges have strengthened. Only the less prestigious liberal arts colleges evidence greater financial vulnerability.

---

[40] James W. Thompson and Richard E. Anderson, "Financial Results During Periods of Inflation," *Business Officer*, January 1983.

The Scramble for Students

The vast majority of colleges and universities, including those in this study, are heavily dependent upon enrollment to generate operational funds. The picture for the public colleges is one of rapid enrollment growth during the first seven years of the decade followed by a leveling. FTE attendance at small independent colleges was virtually unchanged over the decade. The private Comprehensive Colleges and Universities experienced some steady growth over the entire twelve year period.

Conversations with campus officials as well as other data collected reveal that the enrollments have been maintained by "scrambling". The percent of applicants accepted, for example, has risen. The apparently liberalized admissions policies are especially noticeable at public and private Comprehensive Colleges and Universities and at Private Liberal Arts II colleges. In contrast to the percentage of students accepted, the matriculation "yields" from students offered admission are down, particularly at the public institutions. Average SAT scores for entering freshman are down for all categories of institutions but the rate of change parallels the average score for all test takers.

When campus officials discuss their concerns for their colleges, they tend to mention first enrollments and related issues. And their anxiety about enrollments often sets the context for other issues. One campus official, for example, worried that breaches in campus security would make students afraid to attend. These officials are responding by doing almost everything they can to make their institutions more attractive to students -- to both traditional young adults as well as to area residents. Of course, if these accommodations are taken to such extremes as to subvert the academic program, there will be cause for alarm. The results of the IFI, however, while not specifically addressing academic abuses, provide evidence that this competition for students may be having some positive influences on educational processes and procedures.

THE CHANGES IN CAMPUS ENVIRONMENT

Changing faculty responses to the Institutional Functioning Inventory reveal several clear (and statistically significant) trends occurring during the decade. Most of these changes support commonly held perceptions about the current higher education environment. Particularly noticeable is the increase in the continuing educational efforts of these institutions. In the early seventies two-thirds of the faculty responded that their campus had an adult education program. By 1981, 79 percent reported the existence of these programs. Campus diversity has increased -- at least socio-economically if not politically. Many more students of varying backgrounds and abilities are attending in the 1980's. Consequently there has been a large increase in the visibility of programs for disadvantaged students. In 1981, 88 percent of the respondents reported such programs on their campus compared with 63 percent ten years earlier. These efforts are only part of the structural changes that have occured to meet the needs of undergraduate students. Faculty responses indicate that tenure and promotion are more likely to be based on teaching effectiveness. These professors also report that their colleagues are more concerned with "the best method to communicate knowledge to undergraduates" and with getting to know their students better. As a result of these and other changes the Concern for Undergraduate Learning scale increased significantly during the decade.

Some of the IFI scales registered declines. For example, faculty perceive their colleges to be less democratically governed. According to the respondents, administrators are making more of the decisions and involving students and faculty less than they did in the early 1970's. Professors also perceive considerably less academic innovation and, in the 1980's, the impetus behind new ideas is more likely to be financial. As college campuses become more conservative their constituents also exhibit less interest in improving society. Faculty note this reduced concern in themselves, in their students, and in the administrators and the trustees of the institutions. In 1973 the Carnegie Commission lists "(t)he critical evaluation of society...for the sake of society's self-renewal" as one of the main purposes of higher education in the United States today.[41] In this respect, colleges are less successful today than they were at the time of the Carnegie publication--a particularly worrisome development. As the Carnegie Council notes: "Public confidence is basic to public financial support..."[42] Tax payers support higher education because they believe it serves a public good. To the extent that colleges and universities are perceived as self-serving, public confidence and public support are likely to decline.

Although the drop measured for the Institutional Esprit scale is not statistically significant, the changes on some items deserve special attention. The faculty members express less confidence in their campus administrators, and they report fewer personal friendships with them. Faculty morale is lower and professors are less committed to the purposes of their institution.

In spite of the measured declines on the IFI, these college appear to be functioning about as effectively in 1981 as they did in the early seventies. The average Weighted Scale score, constructed from presidential assessments of the significance of each scale to their institution, is unchanged over the decade. The colleges are not as freewheeling in the 1980's -- and probably not as much fun. The "scramble" for students has intruded upon the college environment. Administrators are making more of the decisions. At the same time, and for related reasons, the instruction of undergraduate students is receiving more attention. Disadvantaged students are more likely to get remedial instruction and colleges are reaching out and offering their services more regularly to their neighbors.

---

[41] Carnegie Commission on Higher Education, *The Purposes and the Performance of Higher Education in the United States* (New York: McGraw-Hill, 1973) p. 1.

[42] Carnegie Council on Policy Studies in Higher Education, p. 23.

The changes on the IFI scales were not uniform for all groups of institutions, particularly in the public sector. The public universities--both the comprehensive regional ones and those with a major committment to research and doctoral programs -- exhibited increases on almost all scales except Concern for Innovation. In contrast, the community colleges declined on four scales with seven of the IFI indices remaining essentially unchanged. Most of the faculty at these two-year institutions perceive themselves to be largely excluded from government and morale has declined precipitously. The innovative character and willingness to experiment also appear greatly diminished. When faculty at two-year colleges are asked if they could get $500 for a worthwhile community service project, only 43 percent thought they could get the funds -- a response rate that is almost identical to that of all faculty.

RESOURCES AND FACULTY PERCEPTIONS

Any attempt to statistically explain the changes in faculty perceptions using institutional financial data is laden with methodological and conceptual problems. The target for these analyses was a general one, and there were no expectations of scoring a bulls-eye. The intent was to try to establish patterns of, rather than precise, relationships. Generally, the analytic shots hit nothing and sometimes when they did strike, the results conflicted with commonly held perceptions.

Changes in enrollments and finances, configured in a variety of ways, did not predict changes on the Weighted Scale nor did they predict changes in Institutional Esprit. The latter scale includes measures of faculty morale, confidence in the administration, and general assessments of institutional achievement. How can this be? Are the measures in error? The IFI is not an entirely satisfactory instrument with which to gauge college and university effectiveness. It relies on the perceptions of campus constituents and does not incorporate more concrete estimates of output. Then too, only faculty, not administrators nor students, were polled for this study. Regardless of these and other problems, the IFI has established measures of reliability and validity. Moreover, the instrument did confirm trends in higher education that are generally understood to have occurred. With regard to the financial measures, many statistics were used and this variety offers some protection against the possibility of misconstrued variables. Almost all of them have been used and tested by experts in the field. Some are almost tautologically linked with financial health. It is difficult to argue, for example, that changes in educational and general income and simultaneous measures of change in educational and general income per student (both corrected for inflation) are not reasonable gauges of financial change. Moreover, the financial trends reported in this volume have been confirmed by many others. The probable reason that the financial changes do not correlate with changes on the IFI is that colleges and universities compensate. If enrollments and income show signs of decline, colleges simply try harder. If fewer eighteen to twenty-two year olds matriculate, colleges compensate by reaching out to area adults. College officials and faculty also bid for potential students by increasing their attention to the college's instructional programs. Indeed, changes on the Concern for Undergraduate Learning scale are inversely related to enrollment trends. Similarly, administrators and trustees, worried about balancing the institutional budget, may place less emphasis on scholarship. Faculty, however, seem to have compensated by writing more, probably to improve their chances in the deteriorating academic labor market.

These remarks are quite speculative if based only on the statistical data. They are confirmed to some extent, however, by the campus visits. The campus interviews further suggest that colleges can compensate: they can grapple with adverse financial trends in ways that are organizationally constructive.

SUCCESSFUL AND UNSUCCESSFUL COLLEGES

In the early 1970's, community colleges were perceived to be the strategically best situated institutions of higher education. Tuitions were low and numerous appealing occupational programs were already in place at these colleges. Most were administratively and geographically oriented toward continuing education. Indeed, during the seventies, enrollments and income in the two-year sector grew more rapidly than in any other sector. Yet faculty members at these institutions, our data suggest, are now much more dispirited, and they judge their institutions as less effective today than a decade earlier.

Apparently, then, money does not buy happiness. Indeed, as discussed below, the unusually rapid growth may have contributed to the problem at the two-year colleges. Our visits to thirteen colleges provided some useful information about college finance and management at both two- and four-year institutions. And although the sample is not large enough to support a new theory of institutional leadership, it provides a basis for commenting on the assertions of others in this area. Specifically, Cohen and March are skeptical about the ability of presidents to change their institutions to any significant degree. Although this is probably correct in most instances these data show that there are circumstances under which meaningful leadership is possible. Presidential leadership was conspicuous and instrumental at the successful colleges visited in this research project. It is probably not coincidental, however, that the institutions visited tended to be small and without national reputation. None of the private colleges was much larger than 1000 FTE students, and all of the public institutions, save one, had enrollments of 5000 or less (the exception enrolled 10,000 FTE students at its peak). To the extent that colleges and universities are ungovernable, the quintessential forms of anarchy are likely to occur in the largest and most prestigious institutions. Cohen and March deliberately overrepresented large and wealthy institutions in their sample.[43] Only one college in our sub-sample of thirteen would fall within Cohen and March's designation of wealthy and only one university (and that one only during its peak enrollment year) would be designated large in their schema. No public flagship campuses were in the sub-sample nor were there any institutions in Barron's two most competitive categories (Most Competitive and Highly Competitive). In short, this study may have found cases in which leadership was a salient factor because it looked among more common colleges and universities. As a result, these conclusions may not pertain to the largest and most prestigious institutions.

Cohen and March recommend that the "opposition" be offered "genuine authoritative participation" in governance.[44] In fact, democratic governance is a theme that runs through the most effectively managed institutions in the sub-sample, and shared-authority was generally absent in the least effective institutions. Our interpretation, however, is somewhat different than Cohen and March's. They assert that shared authority will reduce the expectations by participants of what organizational change can achieve.[45] This may be true, but there is another reason related to the "unclear technology" idea proposed by Cohen and March. If colleges do not know how they produce nor how they can measure their products, it follows that these institutions will have difficulty in controlling and evaluating their principal actors, the faculty. This is particularly true if tenure and collective bargaining agreements intrude in personnel policies. For an institution to be successful the faculty must be creative, energetic, and dedicated to the institution. Sustaining these qualities for a prolonged period of time is a monumental task and probably cannot be achieved through bureaucratic management. If you cannot measure with reasonable accuracy what someone is doing, you cannot evaluate and control that individual with ordinary management techniques. Cohen and March perceive organizational value in institutional foolishness and playful experimentation as a way of improving the technology of colleges and universities. Playfulness may be whimsical or purposeful depending upon the attitude of the faculty. If a president cannot control the faculty, he will have to win their hearts. Professors must believe in their institutions; they must assume a sense of proprietorship of their campuses. Democratic governance may be the best means by which to cultivate this "ownership" attitude. If faculty members feel that they govern the institution, then they are more likely to give their energies to the institution's best interests. This seems to be as true for community colleges as it is for four-year institutions. One of the glaring differences between City Two-Year and the other public two-year colleges was the sincere and meaningful respect given to democratic governance at City Two-Year (and at most successful colleges in the sub-sample). In contrast, there was very little shared authority at Muni Two-Year in 1980. A decade ago the faculty did believe that responsibility for governance was widely distributed. Now many of the creative efforts of the professors at this disaffected institution are directed at combatting the administration. The faculty union, for example, has become a political force in municipal elections and is actively seeking to unseat members of the system's board of trustees. The "systematic" and unilateral efforts to eliminate inefficiencies in the system have insulted the faculty's sense of professionalism and reduced the college's effectiveness.

---

[43] Michael D. Cohen and James G. March, *Leadership and Ambiguity* (New York: Carnegie Commission on Higher Education/McGraw-Hill, 1974), p. 238.

[44] Ibid., p. 209.

[45] Cohen and March, p. 209.

There are several corollaries that follow this democratic governance theorem. One is that a degree of inefficiency is inevitable -- although some of the waste may actually be a matter of perspective. If a dean carefully selects faculty, if the professors assume a "proprietary" stake in the college, and if they are allowed a large measure of self-governance, there is likely to be creative and energetic activity. The products may not be precisely what the dean or president desires. Good people, we are often told, can differ. The alternative of ferreting out every faculty member who falls below average or of attempting to eliminate every instance of course or program duplication can backfire. Muni Two-Year is a good example of such bureaucratic failure. The president of Surburban Two-Year was also characterized by several respondents as "intolerant of waste." This attribute contributed to his support by the board of trustees as well as to his alienation from the faculty. These two cases may provide a clue as to why community colleges have experienced such environmental disorder during the decade. Authorities in local governments are more accustomed to dealing with elementary and secondary schools and have less understanding of the processes and governance of higher education. Unlike their state counterparts, they are in close proximity to their institutions. Both they and the electorate, to whom they are responsible, may perceive institutional inefficiencies more quickly and attempt to act against them. Inefficiencies are particularly noticeable as enrollments level off or decline. If the faculty "ownership" attitude is significantly diminished by these attempts at increased efficiency, the system may lose more than it gains in cost savings.

Although democratic governance is a critical ingredient of good college management, it is apparently not an inviolable construct. There are both areas and times for which the autocratic exercise of authority is both appropriate and effective. Though, in many ways, the presidents of succesful institutions we visited assumed an unobtrusive managerial style as recommended by Cohen and March,[46] this was not so in areas of hiring, promotion, and termination of faculty. Both the presidents and the chief academic officers at successful colleges and universities, we found, are almost obsessive in their zeal in involving themselves in personnel decisions. The dean at Plain College personally interviews students from the classes of professors being reviewed for tenure. The president of Special College reversed all fifteen promotion recommendations that crossed his desk during his first year as "acting president." On four occasions in the last ten years, City Two-Year fired tenured faculty member for "cause." The officials involved explain that faculty are the major resource of their institution, and that they, the administrators, are willing to concentrate their efforts, "use up their chips" if you will, in this one area. Administrative under-involvement in personnel decisions may also help to explain the currently measured environmental stress at two-year institutions. Many of these colleges were growing 20 percent or more each year during the 1960's and early 1970's. It is likely that administrators could not devote proper attention to personnel decisions and, as a result, some faculty were hired and given tenure who would have been weeded out during a more stable period.

There are other times when presidents may intrude more broadly in the operation of their institutions. These occasions seems to arise under unique circumstances, generally under the press of outside events. When Special University was about to close, the new "acting" president was able to reverse that decision but then restructured the college to make it more effective and politically defensible. Another president at a public university successfully restructured his institution because enrollments had fallen precipitously and tenured faculty had been fired the year before his arrival. Morale and most other measures of the IFI rose during the tenure of these two activist presidents. Both agree, however, that such intervention would have been impossible in a normal period.

---

[46] Cohen and March, p. 3.

Administrators have been exhorted by many authorities to prepare for the future with long-range plans. Cohen and March, on the other hand, tend to disparage the usefulness of plans qua plans;[47] they see plans having indirect rather than direct benefits. But at the successful colleges we visited, planning was taken quite seriously. It may be argued that the reliance on planning is indicative of organized management and that the plans themselves are not really necessary for effective leadership. But again, this was definitely not the case at most of the successful colleges visited. Contrary to the presidents in Cohen and March's sample, the president of Plain College relied on and continually referred to his planning document which was both specific and comprehensive. Planning was, however, more influential at private colleges than at public institutions. The effective institutions in the public sector showed a greater sense of organization and more attention to data analysis than the less effective colleges, but the disparity was not as obvious as in the private sector. The reason seems to be that private institutions are essentially dealing with an impersonal environment. They must collect information about that environment, analyze it, and disseminate the results within their organization. There is little else they can do to get ready for the future. Weather reports are not perfect but they help one prepare. In contrast, much of the "environment" of public colleges is more interactive--with the legislature taking the form of an organizational deity. All planning can go awry if the state capital decides on a budget cut. Some organizational effort may be usefully diverted from planning to convincing the legislature that rain in this season of the college's life would be particularly detrimental to the public good.

Another observation that arises from these visits is that educational leadership may be more difficult at publicly supported colleges than at independent institutions. The president of a public college is likely to be viewed as guardian of the budget. His job is to maintain or increase the current level of public funding and not significantly disrupt the operation of the college. The faculty of private institutions more commonly perceive their institutions as at risk. They worry about a tuition level which they might not be able to afford for their own children. They are much more likely to accept program changes, budget cuts, and professional discomfort if the changes are perceived as in the best interest of their institution. If the budget of a public college is insufficient the president is the first to be blamed. Before the two public university presidents could enact major changes at their institutions, there had to be campus-wide recognition of institutional jeopardy. In one case, tenured faculty were laid off; in the other the university's closing had been publicly announced. These actions created leadership legitimacy for the presidents. The situations do not need to be so dramatic. If there are real financial crises in state systems of higher education, system administrators can assist public college administrators in their press for efficiency by directly and publicly communicating the problems to the various campus constituencies.

---

[47] Cohen and March, p. 113.

Another strategy for public college presidents is to acquire and control funds outside the normal budgeting process. The president of Special University brought in research grants for his faculty. The president of Muni Two-Year raised funds from private philanthropy which were used for faculty retraining, travel, and program development. The presidents at both gave considerable time to publicly acknowledging faculty achievements. The faculty recognized and appreciated these administrative efforts. In contrast, a department chairman at Surburban Two-Year college observed that "there are no rewards for extra-duty here."

Cohen and March tend to deprecate the potential impact of presidential stewardship. The campus visits suggest that leadership may be constrained more under normal circumstances than during periods of hardship. Moreover, smaller and less prestigious colleges, those most in jeopardy, seem more susceptible to control than the larger and better-known institutions. As higher education moves through the 1980's with its projected enrollment declines and continued financial difficulties, the successful colleges and universities in this study offer some reason for optimism. Thoughtful yet bold leadership can overcome many problems. Planning is not an obsolete concept, and is especially important for the private sector. Academic administrators in the public sector must perform a delicate balancing act: on the one hand the trustees and legislators expect them to reduce institutional inefficiency; on the other hand, the faculty expects a certain amount of protection. But the cases investigated in our visits suggest that the balance can be struck. Democratic governance is an important feature in both sectors as college leaders attempt to control and move organizations whose products defy measurement. Faculty involvement in college and university management does not preclude decisive administrative actions in personnel matters. Indeed, the most successful college presidents tend to impose their will more in the important area of personnel than in any other.

APPENDIX A.
INSTITUTIONS BY CARNEGIE CLASSIFICATION

Public

Public Research and Doctoral

Georgia State University
Kentucky, University of
Massachusetts, University of
Minnesota, University of
South Carolina, University of
State University of New York (SUNY) at Binghamton

Public Comprehensive Universities and Colleges

California State University (at Chico)
Central Michigan University
Fitchburg State College, Massachusetts
Glassboro State College, New Jersey
Governors State University, Illinois
Kearney State College, Nebraska
Mankato State University, Minnesota
North Adams State College, Massachusetts
North Carolina Agriculture and Technical State University
North Carolina Central University
Pittsburgh, University of (at Johnstown) Pennsylvania
Sangamon State University, Illinois
Special University*
Stockton State College, New Jersey
Tennessee, University of (at Martin)
Virginia State University
Wayne State College, Nebraska
Wisconsin, University of (at Oshkosh)

* Pseudonym

INSTITUTIONS BY CARNEGIE CLASSIFICATION

Public Two-Year Institutions

- Black Hawk College, Illinois
- City Two-Year College*
- Delta College, Michigan
- Denver, Community College of (North Campus), Colorado
- McHenry County College, Illinois
- Modesto Junior College, California
- Northern Essex Community College, Massachusetts
- Saint Louis Community College (at Florissant Valley), Missouri
- Scott Community College, Iowa
- Suburban Two-Year College*

* Pseudonym

INSTITUTIONS BY CARNEGIE CLASSIFICATION

Private

Private Research and Doctoral

Two unnamed universities

Private Comprehensive Universities and Colleges

Augustana College, Illinois
Baldwin-Wallace College, Ohio
Bethel College, Minnesota
Bloomfield College, New Jersey
Canisius College, New York
Chapman College, California
Fairleigh Dickinson University, New Jersey
Goddard College, Vermont
Harding College, Arkansas
Illinois Wesleyan University, Illinois
Luther College, Iowa
Madonna College, Michigan
Millikin University, Illinois
Moravian College, Pennsylvania
Redlands, University of, California
Rochester Institute of Technology, New York
Rockhurst College, Missouri
Roosevelt University, Illinois
St. Thomas, College of, Minnesota
Suffolk University, Massachusetts
Susquehanna University, Pennsylvania
Valparaiso University, Indiana
Wagner College, New York
Wheaton College, Illinois

INSTITUTIONS BY CARNEGIE CLASSIFICATION

Private Liberal Arts I

Albright College, Pennsylvania
Barat College, Indiana
Carroll College, Wisconsin
Earlham College, Indiana
Gordon College, Massachusetts
Haverford College, Pennsylvania
Hobart-William Smith Colleges, New York
Houghton College, New York
Kalamazoo College, Michigan
MacMurray College, Illinois
Westmont College, California

Private Liberal Arts II

Averett College, Virginia
Bethel College, Indiana
Bridgewater College, Virginia
Bryan College, Tennessee
Doane College, Nebraska
Dominican College of Blauvelt, New York
Lambuth College, Indiana
Loretto Heights College, Colorado
Manchester College, Indiana
Marymount College (Tarrytown), New York
Marymount Manhattan College, New York
Mundelein College, Illinois
Ottawa University, Kansas
Simpson College, Iowa
Southwestern University, Texas
St. Joseph's College, New York
St. Thomas Aquinas College, New York
Wilberforce University, Ohio

Private Two-Year Institutions

Dean Junior College, Massachusetts
Harcum Junior College, Pennsylvania
Suomi College, Michigan

APPENDIX B. LISTING OF ITEMS BY SCALE

INTELLECTUAL-AESTHETIC EXTRACURRICULUM

1. There is a campus art gallery in which traveling exhibits or collections on loan are regularly displayed.

5. Foreign films are shown regularly on or near campus.

7. This institution attempts each year to sponsor a rich program of cultural events--lectures, concerts, plays, art exhibits, and the like.

10. A number of nationally known scientists and/or scholars are invited to the campus each year to address student and faculty groups.

14. At least one modern dance program has been presented in the past year.

15. Students publish a literary magazine.

20. At least one serious classical music concert has been given within the past year.

[At least one chamber music concert has been given within the past year.]

25. There are a number of student groups that meet regularly to discuss intellectual and/or philosophic topics.

31. Little money is generally available for inviting outstanding people to give public lectures.

56. The student newspaper comments regularly on important issues and ideas (in addition to carrying out the more customary tasks of student newspapers).

66. Many opportunities exist outside the classroom for intellectual and aesthetic self-expression on the part of students.

Listing of Items by Scale

FREEDOM

Item

8. There are no written regulations regarding student dress.

16. In the past two years, administrators or the governing board have countermanded one or more invitations from student groups to controversial speakers.

22. The institution imposes certain restrictions on off-campus political activities by faculty members.

30. An essentially free student newspaper exists on this campus (with accountability mainly to its readership).

39. Religious authority has meant some curtailment of academic freedom for faculty and students.

47. Radical social or political organizations are not, or would not be, allowed to organize units on this campus.

    [Certain radical student organizations, such as Students for a Democratic Society, are not or probably would not be, allowed to organize chapters on this campus.]

54. Certain highly controversial figures in public life are not allowed or probably would not be allowed to address students.

55. Eccentric convictions and unpopular beliefs among faculty members are generally not frowned upon by senior administrators or governing board members.

61. Faculty members feel free to express radical political beliefs in their classrooms.

64. The governing body (e.g., Board of Trustees) strongly supports the principle of academic freedom for faculty and students to discuss any topic they may choose.

71. Institutional authorities have reprimanded faculty members who have publicly registered their dissent concerning policies of the state or federal government.

72. Unorthodox student life styles tend to be viewed with disfavor by institutional authorities.

[Idiosyncratic or nonconformist student personal styles and appearances (e.g., beards, long hair) tend to be viewed with disfavor by institutional authorities.]

HUMAN DIVERSITY

Item

2. There are provisions by which some number of educationally disadvantaged students may be admitted to the institution without meeting the normal entrance requirements.

11. This institution deliberately seeks to admit a student body in which a variety of attitudes and values will be present.

13. When this institution is looking for new faculty, it goes primarily to a limited number of particular graduate schools.

    [When this institution is looking for new faculty, it goes primarily to a few nearby graduate schools.]

19. A concerted effort is made to attract students of diverse ethnic and social backgrounds.

23. One of the methods used to influence the flavor of the college is to try to select students with fairly similar personality traits.

28. This institution tends to attract students from a somewhat restricted range of socioeconomic backgrounds.

35. A visitor to this campus would most certainly notice the presence of poets, painters, and political activists.

40. When recruiting new faculty, care is taken to seek candidates with a particular set of personal values.

42. A wide variety of religious backgrounds and beliefs are represented among the faculty.

43. A wide variety of religious bachgrounds and beliefs are represented in the student body.

53. Compared with most other colleges, fewer minority groups are represented on this campus.

65. Students or faculty members whose records contain suggestions of unusual characteristics--e.g., bizarre activities unpopular ideas-- are not encouraged to remain here.

[Students or faculty members whose records contain suggestions of unusual characteristics--e.g., bizarre dress unpopular ideas-- are not encouraged to remain here.]

CONCERN FOR IMPROVEMENT OF SOCIETY

Item

3. There are programs and/or organizations at this institution which are directly concerned with solving pressing social problems, e.g., race relations, urban blight, rural poverty, etc.

4. A number of professors have been involved in the past few years with economic planning at either the national, regional, or state level.

9. Professors from this institution have been actively involved in framing state or federal legislation in the areas of health, education, or welfare.

12. Quite a number of students are associated with organizations that actively seek to reform society in one way or another.

18. This institution, through the efforts of individuals and/or specially created institutes or centers, is actively engaged in projects aimed at improving the quality of urban life.

24. A number of faculty members or administrators from this institution have gone to Washington to participate in planning various government programs.

[A number of faculty members or administrators from this institution have gone to Washington to participate in planning various New Frontier, Great Society, and subsequent programs.]

27. Many faculty members would welcome the opportunity to participate in laying plans for broad social and economic reforms in American society.

34. Application of knowledge and talent to the solution of social problems is a mission of this institution that is widely supported by faculty and administrators.

52. The notion of colleges and universities assuming leadership in bringing about social change is not an idea that is or would be particularly popular on this campus.

60. Senior administrators generally support (or would support) faculty members who spend time away from the campus consulting with governmental agencies about social, economic, and related matters.

69. Most faculty on this campus tend to be reasonably satisfied with the status quo of American society.

70. The governing board does not consider active engagement in resolving major social ills to be an appropriate institutional function.

CONCERN FOR UNDERGRADUATE LEARNING

Item

6. There are established procedures by which students may propose new courses.

17. Faculty promotion and tenure are based primarily on assessments of teaching effectiveness.

    [Faculty promotion and tenure are based primarily on an estimate of teaching effectiveness]

32. Generally speaking there is not very much contact between professors and undergraduates outside the classroom.

33. Senior professors seldom teach freshman or sophomore courses.

37. Either tutorials or extensive independent studies are important features of the undergraduate curriculum.

45. How best to communicate knowledge to undergraduates is not a question that seriously concerns a very large proportion of the faculty.

49. Professors get to know most students in their undergraduate classes quite well.

51. Most faculty members do not wish to spend much time in talking with students about students' personal interests and concerns.

58. Because of the pressure of other commitments, many professors are unable to prepare adequately for their undergraduate courses.

59. Most faculty members are quite sensitive to the interests, needs, and aspirations of undergraduates.

63. In recruiting new faculty members, department chairmen or other administrators generally attach as much importance to demonstrated teaching ability as to potential for scholarly contributions.

68. Capable undergraduates are encouraged to collaborate with faculty on research projects or to carry out studies of their own.

DEMOCRATIC GOVERNANCE

Item

26. In general, decision making is decentralized whenever feasible or workable.

20. Meaningful arrangements exist for expression of student opinion regarding institutional policies.

36. In dealing with institutional problems, attempts are generally made to involve interested people without regard to their formal position or hierarchical status.

38. This institution tends to be dominated by a single "official" point of view.

41. Power here tends to be widely dispersed rather than tightly held.

44. Serious consideration is given to student opinion when policy decisions affecting students are made.

46. In reality, a small group of individuals tends to pretty much run this institution.

48. Governance of this institution is clearly in the hands of the administration.

50. In arriving at institutional policies, attempts are generally made to involve all the individuals who will be

directly affected.

57. There is wide faculty involvement in important decisions about how the institution is run.

62. Students, faculty and administrators all have opportunities for meaningful involvement in campus governance.

67. A concept of "shared authority" (by which the faculty and administration arrive at decisions jointly) describes fairly well the system of governance on this campus.

MEETING LOCAL NEEDS

Item

73. This institution operates a program of evening courses open to local area residents.

[This institution operates an adult education program, e.g., evening courses open to local area residents.]

75. Courses are offered through which local area residents may be retrained or upgraded in their job skills.

77. Counseling services are available to adults in the local area seeking information about educational and occupational matters.

80. There is a job placement service through which local employers may hire students for full- or part-time work.

83. Facilities are made available to local groups and organizations for meetings, short courses, clinics, forums, and the like.

86. There are a number of courses or programs that are designed to provide manpower for local area business, industry, or public services.

87. Courses dealing with artistic expression or appreciation are available to all adults in the local area.

91. The curriculum is deliberately designed to accommodate a great diversity in student ability levels and educational-vocational aspirations.

95. Attention is given to maintaining fairly close relationships

with businesses and industries in the local area.

119. There are no courses or programs for students with educational deficiencies, i.e., remedial work.

128. The location of this campus makes it easily accessible to students who live at home and commute.

130. This institution considers its most valuable service to lie in educating the upper ten percent or so of secondary school graduates.

SELF-STUDY AND PLANNING

Item

76. There is a long-range plan for the institution that is embodied in a written document for distribution throughout the institution

78. Reports of various institutional studies are announced generally and made available to the entire teaching and administrative staff.

81. One or more individuals are presently engaged in long-range financial planning for the total institution.

84. The institution has a long-range plan based on a reasonably clear statement of goals.

88. At the present time, there is greater emphasis on departmental planning than on institution-wide planning.

92. Analyses of the philosophy, purposes, and objectives of the institution are frequently conducted.

93. Planning at this institution is continuous rather than one-shot or completely nonexistent.

103. The change that has taken place at this institution in recent years has been more the result of internal and external influences than of institutional purposes (and deliberate planning based thereon).

108. Currently there is wide discussion and debate in the campus community about what the institution will or should be seeking to accomplish five to ten years in the future.

110. Most administrators and faculty tend to see little real value in data-based institutional self-study.

125. There is an institutional research agency at this institution which does more than simply gather facts for the administration.

132. Laying plans for the future of the institution is a high priority activity for many senior administrators.

CONCERN FOR ADVANCING KNOWLEDGE

Item

74. Government or foundation research grants comprise a substantial portion of the institution's income.

79. A number of departments frequently hold seminars or colloquia in which a visiting scholar discusses his ideas or research findings.

    [A number of departments frequently hold seminars or colloquia in which a visiting scholar discusses ideas or research findings.]

82. Quite a number of faculty members have had books published in the past two or three years.

85. There are a number of research professors on campus, i.e., faculty members whose accomplishments primarily entail research rather than teaching.

89. The average teaching load in most departments is eight credit hours or fewer.

90. Faculty promotions generally are based primarily on scholarly publication.

94. Extensive laboratory facilities exist for research in the natural sciences.

99. In general, the governing board is committed to the view that advancement of knowledge through research and scholarship is a major institutional propose.

102. Few, if any, of the faculty could be regarded as having

national or international reputations for their scientific or scholarly contributions.

109. Professors engaged in research that requires use of a computer have easy access to such equipment.

115. One or more important scientific breakthroughs have been achieved at this institution in the past five years.

129. Senior administrators do not consider advancement of knowledge through research to be an important institutional purpose.

CONCERN FOR INNOVATION

Item

96. There is a general willingness here to experiment with innovations that have shown promise at other institutions.

98. In the last few years, there have been a number of major departures from old ways of doing things at this institution.

100. A sense of tradition is so strong that it is difficult to modify established procedures or undertake new programs.

101. High-ranking administrators or department chairmen generally encourage professors to experiment with new courses and teaching methods.

105. It is almost impossible to obtain the necessary financial support to try out a new idea for educational practice.

107. There have been few significant changes in the overall curriculum in the past five years.

113. Proposed curricular changes seem to be accepted or rejected more on the basis of financial considerations than of assumed educational merit.

114. The curriculum committee of the college concerns itself with basic curriculum issues rather than, for example, merely approving or disapproving new courses.

118. Almost all ideas for innovations must receive the approval of top-level administrative officials before they can be tried out.

120. This institution would be willing to be among the first to

experiment with a novel educational program or method if it appeared promising.

124. There is an air of complacency among many of the staff, a general feeling that most things at the college are all right as they are.

127. In my experience it has not been easy for new ideas about educational practice to receive a hearing.

INSTITUTIONAL ESPRIT

Item

97. Most faculty members consider the senior administrators on campus to be able and well-qualified for their positions.

104. Generally speaking, top-level administrators are providing effective educational leadership.

106. Generally speaking, communication between the faculty and the administration is poor.

111. Staff infighting, backbiting, and the like seem to be more the rule than the exception.

112. The institution is currently doing a successful job in achieving its various goals.

116. Close personal friendships between administrators and faculty members are quite common.

117. In comparison with most other institutions, faculty turnover here appears to be somewhat high.

121. Although they may criticize certain practices, most faculty seem to be very loyal to the institution.

122. There is a strong sense of community, a feeling of shared interests and purposes, on this campus.

123. In general, faculty morale is high.

126. The faculty in general is strongly committed to the acknowledged purposes and ideals of the institution.

131. Most faculty would not defend the institution against

criticism from outsiders.

Brackets around an item indicate the wording of an item prior to 1978.

Bibliography

AAUP Bulletin American Association of University Professors. Summer issues 1960 to 1978.

Academe. American Association of University Professors. September issues 1979 to 1981.

Anderson, Richard E. "New Competition for an Old Market," *Lifelong* Learning Vol. 25, No. 5, 1980.

Bowen, Howard R. *The Costs of Higher Education.* San Francisco: Jossey-Bass, 1980.

Breneman David W. and Nelson, Susan K. *Financing Community Colleges: An Economic Perspective.* Washington, D.C.: Brookings Institution, 1981.

Carnegie Commission on Higher Education, *The More Effective Use of Resources*. New York: McGraw-Hill, 1972.

Carnegie Commission on Higher Education. *The Purposes and the Performance of Higher Education in the United States.* New York: McGraw-Hill, 1973.

Carnegie Council on Policy Studies in Higher Education. *Three Thousand* Futures. San Francisco: Jossey-Bass, 1980.

Carnegie Foundation for the Advancement of Teaching. *A Classification of Institutions of Higher Education*. New York: The Carnegie Foundation for the Advancement of Teaching 1976.

Chase, Clinton I. and Barritt, L. Spencer. "A Table of Concordance between ACT and SAT" in *College Student Personnel*, Vol. 7, No. 2, 1966.

Cohen, Michael D. and March, James G. *Leadership and Ambiguity*. New York: Carnegie Commission on Higher Education/McGraw-Hill, 1974.

Committee on College and University Accounting and Reporting. *Audits of Colleges and Universities*. New York: American Institute of Certified Public Accountants, 1973.

Comparative Data, Institutional Functioning Inventory, Community Colleges. Princeton, N.J.. Educational Testing Service, 1982.

Collier Douglas J. and Patrick, Cathleen. *A Multivariate Approach to the Analysis of Institutional Financial Condition.* Boulder, Colorado: National Center for Higher Education Management Systems, 1978.

Deitch, Kenneth. *Some Aspects of the Economics of American Higher* Education. Cambridge, Massachusetts: Sloan Commission on Government and Higher Education, 1977.

Farmer, James. "Agenda for 1979" in *Measuring the Financial Conditions of Colleges and Universities.* Washington, D.C.: American Council on Education, 1979.

Handbook of Labor Statistics. Washington, D.C.: U.S. Department of Labor, Bureau of Labor Statistics, December, 1980, Bulletin 2070.

Historical Statistics of the U.S. -- Colonial Times to 1970. Washington, D.C.: U.S Dept of Commerce, Bureau of Census.

Hutchins, Robert M. "Hard Times and the Higher Learning" in *Yale Review*, Vol. 22, 1933.

Jellema, William W. *From Red to Black?*. San Francisco: Jossey-Bass, 1973.

Jencks, Christopher and Riesman, David. *The Academic Revolution.* Garden City, NY: Doubleday, 1968.

Kaiser, H.H. *Mortgaging the Future: The Cost of Deferred Maintenance.* Washington, D. C.: Association of Physical Plant Administrators, 1979.

Lanier, Lyle H. and Andersen Charles J. *A Study of the Financial Condition of Colleges and Universities:1972-1975.* Washington, D.C.: American Council on Education, 1975.

Leslie, Larry L. and Miller, Howard F. Jr. *Higher Education and the Steady State.* Washington, D.C.:American Association for Higher Education, 1974.

Maxey, E. James and Lenning, Oscar T. "Another Look at Concordance Tables between ACT and SAT," *College Student Personnel*, Vol. 15, No. 4, 1974.

Minter W. John and Bowen, Howard R. *Independent Higher Education: Fifth Annual Report.* Washington, D.C.: National Institute of Independent Colleges, 1980.

Minter, W. John and Bowen, Howard R. *Preserving America's Investment in*

Human Capital. Washington, D. C.:American Association of State Colleges and Universities, 1980.

Mortimer, Kenneth P. and Tierney, Michael L. *The Three "R's" of the Eighties: Reduction, Reallocation and Retrenchment*. Washington, D.C.:American Association of Higher Education, 1979.

Peterson, Richard E., Centra, John A., Harnett, Rodney T., and Linn, Robert L. *Institutional Functioning Inventory Preliminary Technical Manual*, Princeton, N.J.: Educational Testing Service, 1970.

Ratio Analysis in Higher Education. New York: Peat, Marwick, Mitchell and Co., 1980.

Riesman, David *On Higher Education*. San Francisco: Foundation for the Advancement of Teaching/Jossey-Bass, 1980.

Statistical Abstract of the U.S. 1971-1974, 1976-1981.

Thompson, James W. and Anderson, Richard E. "Financial Results During Periods of Inflation" in *Business Officer*, January 1983.

Thornton, James Jr. *The Community Junior College*. New York: John Wiley, 1960.

About the Author

Richard Anderson is Associate Professor of Higher Education at Teachers College, Columbia University and Chairman of the Department of Higher and Adult Education. He has written extensively on financial issues of post-secondary education. His books include *Strategic Policy Changes at Private Colleges* and *The Cost and Financing of Adult Education and Training*. He is currently involved in a study of the economics of training programs in American corporations.